LONGSTREET FIRE
BURNED AREA EMERGENCY STABILIZATION PLAN

AGENCY/UNIT: U.S. Fish and Wildlife Service
Ash Meadows National Wildlife Refuge

LOCATION: Nye County, Nevada

DATE: August 9, 2004

PREPARED BY: United States Department of the Interior
Burned Area Emergency Response Team

Submitted By:

Dick Birger, Project Leader Date
Desert National Wildlife Refuge Complex

U.S. DEPARTMENT OF THE INTERIOR
BURNED AREA EMERGENCY STABILIZATION PLAN

PART I REVIEW AND APPROVAL

I. EMERGENCY STABLIZATION PLAN CONCURRANCE

☐ **Concur**

☐ **Concur with Revision**

☐ **Disapproved**

Explanation for Revision or Disapproval:

Project Leader, Desert NWRC Date

II. EMERGENCY STABILIZATION CONCURRENCE

☐ **Concur**

☐ **Concur with Revision**

☐ **Disapproved**

Explanation for Revision or Disapproval:

Regional Fire Management Coordinator Date

III. EMERGENCY STABILIZATION CONCURRENCE

☐ **Concur**

☐ **Concur with Revision**

☐ **Disapproved**

Explanation for Revision or Disapproval:

Manager, California/Nevada Operation Date

IV. EMERGENCY STABILIZATION APPROVAL

☐ **Approved**

☐ **Approved with Revision**

☐ **Disapproved**

Explanation for Revision or Disapproval:

Chief, National Wildlife Refuge System Date

EXECUTIVE SUMMARY

This plan addresses emergency stabilization of fire effects on Ash Meadows National Wildlife Refuge as a result of the 1,630 acres Longstreet Fire in Nye County, Nevada. The plan has been prepared in accordance with the *U.S. Department of the Interior, Departmental Manual, Part 620: Wildland Fire Management, Chapter 3.6:* and the U.S. Fish & Wildlife Service Manual 095 FW 3.9 with implementation guidance Chapter 5 FWS Fire Management Handbook. This document provides emergency stabilization recommendations for U.S. Fish & Wildlife Service lands within the Longstreet Fire burned area.

The primary objectives of the Longstreet Fire Burned Area Emergency Stabilization Plan are:

- To prescribe post-fire mitigation measures necessary to protect human life, property, and critical cultural and natural resources;

- To promptly mitigate the unacceptable effects of the fire impacts on lands within the burned area in accordance with management policy and guidelines and all relevant federal, state/local laws and regulations;

The U.S. Department of the Interior, Burned Area Emergency Response (BAER) Team has conducted an analysis of fire effects on the cultural and natural resources of Ash Meadows National Wildlife Refuge (NWR) using ground and helicopter reconnaissance methods and satellite imagery. The plan primarily addresses impacts to the Federally listed endangered species associated with Ash Meadows NWR. Ash Meadows NWR was in 1984 primarily to protect 13 threatened and endangered species and at least 24 plants and animals found no-where else in the world. The abundance of indigenous life distinguishes as having a greater concentration of endemic species than any other area of it size in the United States, and the second greatest concentration of endemic species in North America. The refuges large number of endemic species is directly related to its unique hydrogeology. Ash Meadows NWR is a major discharge point for a vast underground aquifer with more than 30 major seeps and springs discharging over xxxxx gallons of water per hour and supporting a vast network of spring, wetland, and riparian habitat in the Mojave Desert.

While the Longstreet Fire burned only 1,598 acres of the approximately 23,000 acre Ash Meadows National Wildlife Refuge, the burned affected important spring, riparian, and wetland habitats including burning over one major spring and the Carson Slough Riparian Area. Due to prior land management practices, before establishment of the refuge 1984, a major effort has been underway to control established noxious weeds and restore native spring, riparian, and wetland habitats. The Longstreet Fire impacted areas major portions of this habitat.

Survival of many of the endemic species within Ash Meadows NWR is dependent upon emergency control of noxious weeds and reestablishment of native cover to prevent the spread of noxious weeds into the burned area. For these reasons U.S. Fish and Wildlife Service refuge biologists, biologist of the Service's Endangered Species Recovery Program, and members of the Ash Meadows noxious weed and habitat restoration program have recommended emergency treatment of noxious weeds and planting of native plant species to prevent significant loss of native species habitat within the Longstreet Fire Burned Area. Monitoring of noxious weed emergence and establishment native plantings are included in the plan to determine if supplemental treatments will be necessary.

This plan documents that damage to the resources of Ash Meadows NWR and provides specific costs for emergency stabilization actions necessary to ensure that critical native habitats adequately recovery during the next growing season to support the Federal endangered species and rare endemic plants within the burned area consistent with approved recovery plan goals and legislative mandate for the refuge which states that Ash Meadows National Wildlife Refuge is to be managed *"to conserve (A) fish or wildlife which are listed as endangered species or threatened species….or (B) plants…"* 16 U.S.C. 1534. All specifications are fully consistent with the approved Land Management Plans (2000), Fire Management Plan (1986), and Draft Comprehensive Conservation Plan (2004) for the Ash Meadows

National Wildlife Refuge and Desert National Wildlife Refuge Complex, as well as the *Recovery Plan for Endangered and Threatened Species of Ash Meadows, Nevada*.(1990).

FIRE INFORMATION

The Longstreet Fire started on August 1, 2004 as the result of a lightning strick within the boundary of Ash Meadows National Wildlife Refuge. The fire suppression effort was managed under a by Refuge with assistance from the Bureau of Land Management and Nye County. On Tuesday August 3, 2004 the Longstreet Fire was declared contained and county and local resources were released. Suppression tactics included limited handline construction and back burning off of existing fire breaks. The Longstreet Fire was declared controlled on August 4, 2004.

ISSUES AND OBJECTIVES

The BAER Team was assembled on August 4, 2004 at the Ash Meadows National Wildlife Refuge and with the approval of the Incident Command Team initiated preliminary damage assessments and photo documentation of all impacts to refuges resources.

Issues identified by the Team included:

- Boundary Fence and Refuge Closure Sign Damage
- Loss of Endangered, Threatened, and Endemic Species Habitat
- High Potential for Noxious Weed Spread within the Burned Area
- Need for Immediate Reestablishment of Native Plant Cover
- Need to Monitor Recovery Effectiveness of Noxious Weeds and Replanting Treatements
- Need to Protect Cultural Resources Sites Exposed by Loss of Vegetative Cover

Each of the above issues directly relate to mitigating impacts of the Longstreet Fire to management and recovery of the Federal endangered or threatened species and species endemic to Ash Meadows NWR that are protected under the enabling legislation for the refuge and are therefore fundable under the U.S. Department of the Interior, Burned Area Emergency Stabilization Program.

Implementation of the mitigation treatments for these species and their habitat should be initiated as quickly as possible through the Implementation Leader designated for the project. It is important to the emergency stabilization project for the Implementation Leader to coordinate the recommended activities, track budgets, coordinate contracts, and prepare accomplishment reports in a timely manor.

This Emergency Stabilization Plan is the initial funding request for Emergency Stabilization funds. Additional supplemental requests may be made after this document has been reviewed and approved. It is recommended that supplemental requests be made on an as needed basis. The Emergency Stabilization Funds for this plan extends over one year from the date of containment of the fire. At the conclusion of the funding period, a final Accomplishment Report will be due to the approval authority. The Accomplishment Report will document the funding received (initial and supplemental funding), treatments installed, the effectiveness of the installed treatments, and the results of monitoring activities. This Plan was submitted to the approving official, in accordance with Interagency Burned Area Emergency Stabilization and Rehabilitation guidelines within 10 days of fire containment.

U.S. DEPARTMENT OF THE INTERIOR
BURNED AREA EMERGENCY STABILIZATION PLAN

PART A FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	Longstreet	**Jurisdiction**	**Acres**
Fire Number	NV-AMR-A9U1	U.S. Fish & Wildlife Service	1,525
Agency Unit	FWS	Bureau of Land Management	66
Region	California/Nevada Operations	Private	39
State	Nevada		
County(s)	Nye		
Ignition Date/Manner	August 1, 2004 Lightning		
Zone	Western Great Basin		
Date Contained	August 3, 2004		
Date Controlled	August 4, 2004	**TOTAL**	1,630

PART B NATURE OF PLAN
Type of Plan (check one box below)

Initial Submission	X
Update and Revising Initial Submission	
Supplying Information For Accomplishment To Date On Work Underway	
Different Phase Of Project Plan	
Final Report (To Comply With The Closure Of The EFR Account	

PART C EMERGENCY STABILIZATION OBJECTIVES

- Locate and stabilize severely burned conditions that pose a direct threat to human life, property, or critically important cultural and natural resources.

- Recommend post-fire emergency stabilization prescriptions that prevent irreversible loss of natural and cultural resources.

- Conduct immediate post-burn reconnaissance for fire suppression related impacts to threatened and endangered (T&E) species, and cultural sites.

- Develop monitoring specifications design to document relative effectiveness of emergency stabilization treatments or whether additional emergency stabilization treatments are required.

U.S. DEPARTMENT OF THE INTERIOR
BURNED AREA EMERGENCY STABILIZATON PLAN

PART D TEAM ORGANIZATIONS, TEAM MEMBERS, RESOURCE ADVISORS

BAER TEAM MEMBERS

POSITION	TEAM MEMBER / AGENCY
Team Leader	David Smith, FWS
Wildlife	Karen Hayden, FS
Environmental Protection & Documentation Specialist	Richard Hadley, FWS
GIS	Carl Hardzenski, BIA
Vegetation Specialist	Dave Smith, FWS
Operations Specialist	Gavin Lovell, BLM
Cultural Resource Specialist	Dan Hall, BIA

RESOURCE ADVISORS: (Note: Resource Advisors are individuals who assisted the BAER Team with the preparation of this plan. See Part H of this plan for a full list of agencies and individuals who were consulted or otherwise contributed to the development of this plan.

NAME	AFFILIATION / SPECIALTY
Dick Birger	Project Leader, Desert NWRC
Linda Miller	Deputy Project Leader, Desert NWRC
Cristi Baldino	Wildlife Biologist, Ash Meadows NWR
Sharon McKelvey	Refuge Manager, Ash Meadows NWR
Lee Nelson	FMO, Desert NWRC
Lee Talbot	Maintenance Worker, Ash Meadows NWR

NAME	AFFILIATION / SPECIALTY
Mark James	IPM Contractor
Joanne Hammaren	Administrative Officer, Desert NWRC
Joyce Catetti	Purchasing Agent, Desert NWRC
Callie Leau Courtright	Outdoor Recreation Planner

U.S. Department of the Interior
BURNED AREA EMERGENCY STABILIZATION PLAN

PART D - SUMMARY OF APPROVAL AUTHORITIES

ACTIVITIES REQUIRING LINE OFFICER'S APPROVAL **Fire Suppression Damages (charged to Fire Suppression)**	**COST**
SUPPRESSION	
Road Regrading (suppression cost not tracked in this plan)	
Handline Rehabilitation (suppression cost not tracked in this plan)	

ACTIVITIES REQUIRING REGIONAL OFFICE APPROVAL **Emergency Stabilization Requests (Charged to ES)**	**COST**
SUBTOTAL	

ACTIVITIES REQUIRING NATIONAL OFFICE APPROVAL **Emergency Stabilization Requests (Charged to ES)**	**COST**
I-1 Fence Repair and Removal	$87,500
I-2 Power Pole Removal	$6,250
I-3 Replace Safety/Resource Protection Signs	$6,440
V-1 Noxious Weed Control	$277,888
V-2 Native Plantings	$218,078
V-3 Monitor Noxious Weeds & Native Planting Treatments	$27,336
C-1 Cultural Resource Protection	$25,808
O-1 Implementation Leader	$81,264
SUBTOTAL	**$730,564**

U.S. DEPARTMENT OF THE INTERIOR
BURNED AREA EMERGENCY STABILIZATION PLAN

PART E SUMMARY OF ACTIVITIES

The SUMMARY OF ACTIVITIES table identifies emergency stabilization costs charged or proposed for funding from fire suppression rehabilitation, emergency stabilization, or rehabilitation funding sources. The total cost of the treatments excluding the costs absorbed by the fire (fire crew, labor and associated overhead) is displayed as either Fire Suppression Rehabilitation (**SR**), Emergency Stabilization (**ES**), Rehabilitation (**R**), or Agency Operations/Other (**OP/O**).

No.	TREATMENT SPECIFICATION	UNIT	UNIT COST	# OF UNITS	COST BY FUND SOURCE			IMPLEMENTATION METHOD	SPECIFICATION TOTAL
					SR	ES	R		
I-1	Fence Repair and Removal	Miles	$3,500	25	-	$87,500	-	C	$87,500
I-2	Power Pole Removal	Miles	$5,000	1.25	-	$6,250	-	C	$6,250
I-3	I-3 Replace Safety/Resource Protection Signs	Signs	$161	40	-	$6,440	-	P	$6,440
V-1	Noxious Weed Control	Acre	$617.53	450	-	$277,888	-	C	$277,888
V-2	Native Plantings	Acre	$484.61	450	-	$218,078	-	C	$218,078
V-3	Monitor Noxious Weeds & Native Planting Treatments	Survey	$781.02	35	-	$27,336	-	C	$27,336
C-1	Cultural Resource Protection	Acre	$64.52	400	-	$25,808	-	P/C	$25,808
O-1	Implementation Leader	Month	$6,772	12	-	$81,264	-	C	$81,264
TOTALS					**-**	**$730,564**	**-**		**$730,564**

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Fence Repair/Removal	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	I-1 Fence Repair/Removal	**FISCAL YEAR:**	2005
ESR REFERENCE #:	6.3.3.1 Minor Facilities	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. General Description:

Re-construct barbed wire fence that served as the Refuge boundary fence on the west side of the fire. The posts and braces were wood and were destroyed by the fire. Remove interior wood post fence lines that are now down and pose a safety risk to refuge visitors and emergency stabilization workers.

B. Location (Suitable) Sites:

The fence to be rebuilt is located on the western boundary of the refuge. Burnt interior fencing to be removed is primarily along the Longstreet Road a major visitor use route.

C. Design/Construction Specifications:

Fence will be 4 strand barbed wire, bottom wire smooth (for wildlife access), with wooden end panels and stress panels. Two gates will be re-built. Design specifications will be to Agency standards.

D. Purpose of Treatment Specification:

The purpose of the treatments is to prevent wild horses and burros from entering the refuge and destroying federal endangered species habitat and rare endemic plant species. The treatment will also remove downed interior wood post fence that was destroyed by the fire and now is a serious safety hazard to the visiting public and workers who will be completing emergency stabilization treatments.

E. Treatment Effectiveness Monitoring

An agency Project Inspector will ensure the fence is constructed to standards established by the Ash Meadows NWR.

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	

MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
TOTAL MATERIAL AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
25 miles @3,500.00/mile	$87,500
TOTAL CONTRACT COST	$87,500

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004						
2005	Miles	$3,500	25	$87,500	ES	C
2006						
TOTAL	Miles	$3,500	25	$87,500	ES	C

F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program	ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression	P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	C
3. Estimate supported by cost guides from independent sources or other federal agencies.	C
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	
P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression	

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
Appendix I – Operations Assessment

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Power Pole Removal	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	I-2 Power Pole Removal	**FISCAL YEAR:**	2005
ESR REFERENCE #:	6.3.3.1 Minor Facilities	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. General Description:

A mile and a quarter of old abandoned powerline was burned in the fire and posses a safety threat to the public and needs to be removed. This will include cutting the remaining standing poles and hauling all poles and wire from the site. This will need to be done in some areas by horses to minimize disturbance to the Refuge where wet and roadless areas exist.

B. Location (Suitable) Sites:

A mile and a quarter of powerline in the fire perimeter. See Appendix III, Impacts map for specific location.

C. Design/Construction Specifications:

1. Cut remaining poles flush to ground and haul all poles and cross members from site.
2. Remove all wire from powerline from site.
3. Limit vehicle access to existing roads which will require horses to remove material to minimize disturbance.

D. Purpose of Treatment Specification:

The purpose of removing this material is to protect the public that will be using the area from partially burned poles as well as remaining material associated with powerline wires and poles.

E. Treatment Effectiveness Monitoring

None

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	
MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
TOTAL MATERIAL AND SUPPLY COST	

TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
5,000 per mile for removal X 1.25 miles X 1 year	$6,250
TOTAL CONTRACT COST	$6,250

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004						
2005	Mile	$5,000	1.25	$6,250	ES	C
2006						
TOTAL	Miles	$5,000	1.25	$6,250	ES	C

F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program	ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression	P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	C
3. Estimate supported by cost guides from independent sources or other federal agencies.	C
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
See Appendix I – Operations Assessment; Appendix III, Impacts Map

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Replace Refuge Boundary and Closed Area Signs	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	I-3 Replace Refuge Boundary & Closed Area Signs	**FISCAL YEAR:**	2004-2005
ESR REFERENCE #:	6.3.3.1 Minor Facilities	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. Provide a Brief General Description of Treatment

Portions of the Ash Meadows National Wildlife Refuge that burned within the Longstreet Fire are closed to the public for the protection of endangered species, and public safety. The standard refuge "Closed Area" Signs are essential for maintaining this closure. This specification would replace signs that burned during the Longstreet Fire. Also, in a few specific areas on the boundary of the Refuge, survey corners burned and will need to be resurveyed.

B. Describe Specific Treatment Location or General Description of Suitable Sites for Treatment

40 locations on the Refuge boundary and throughout the fire area

C. Provide and Number Detailed Design/Construction Specifications

1. Purchase replacements signs and resurvey corners on Refuge boundary.

D. Describe Purpose of Treatment Specification – What Resource will be Protected

Signs are required to maintain closure of Ash Meadows NWR for the protection of endangered species.

E. Describe Treatment Effectiveness Monitoring

N/A

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	
MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
Sign @ $61 / sign X 40 of Signs	$2,440
TOTAL MATERIAL AND SUPPLY COST	$2,440
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**

TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
Resurvey Refuge/Private land boundary	$4,000
TOTAL CONTRACT COST	$4,000

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004	Signs	$161	40	$6,440	ES	P,C
2005	-	-	-	-	-	-
2006	-	-	-	-	-	-
TOTAL	Signs	$161	40	$6,440	ES	P,C

FUNDING SOURCES	SPECIFICATION TYPE	METHOD OF COMPLETION
F= Fire Suppression	ES = Emergency Stabilization	P = Agency Personnel Services
ESR = Emergency Stabilization & Rehab.	R = Rehabilitation	C = Contract
OP/O = Agency Operating Fund	FS = Fire Suppression	EFC = Emergency Fire Contract
EWP = Emergency Watershed Program		FC = Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	M
3. Estimate supported by cost guides from independent sources or other federal agencies.	C
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
See Appendix I – Operations Assessment

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Noxious Weed Control	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	Noxious Weed Control	**FISCAL YEAR:**	2005
ESR REFERENCE #:	6.3.2.3 Revegetation	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. General Description:

Utilize integrated pest management practices (herbicides, biological mechanical, and cultural control methods), as appropriate to prevent the spread and establishment of noxious weeds and undesirable exotic species known to exist within the fire perimeter of the Longstreet Fire and as defined by monitoring.

B. Location (Suitable) Sites:

Control all weeds as defined on the Noxious Weed Map (Appendix III), as “Existing“locations. There are approximately 450 acres of known weed locations.

C. Design/Construction Specifications:

1. Control noxious/non-native weeds within the burn area and as identified by monitoring. Known infestation sites contain primarily Russian Knapweed (*Centaurea repens*), Hyssop bassia (*Bassia hyssopifolia*), and Saltcedar (*Tamarix spp.*) Multiple treatments will be required with a variety of control techniques. Ground and aerial application of chemicals including but not limited to Garlon, Glysophate, Crossbow®, Arsonal® may be required. The AMNWR staff should consult with the US Fish and Wildlife Service’s Ecological Services office in the development of Pesticide Use Proposals for specified treatments. Timing or year of application may need to be adjusted to ensure treatment of each species is conducted in the proper phenological stage to ensure the protection of recovering native and endemic species.
2. Aerial applications will include the use of GPS guided/mapping capable aircraft to ensure treatment accuracy and proper documentation of weed control efforts.
3. Follow-up control in the fall or subsequent years (a request for Emergency Rehabilitation funding will be necessary), on treated sites.
4. Locate, map, and document (using photography, topographic maps, and Global Positioning System--GPS—technology), new weed occurrences within burned area. Provide GPS shapefile to aerial contractors for use in GPS guided applications. Document percent control or kill of noxious weeds.
5. Initiate Agency approved control measures on new weed occurrences where monitoring demonstrates the establishment or expansion of known weed populations.
6. Complete supplemental funding request for ESR funding for noxious weed control of new weed populations within the burned area.

D. Purpose of Treatment Specification:

Control or contain existing noxious weed occurrences to prevent further spread onto uninfested sites within the burn area. Protect the ecological integrity and site productivity of nine (9) Threatened or Endangered plant and animal species and their associated habitats on lands administered by the AMNWR. Prevent spread of noxious weeds into critical habitats of T&E species on unburned lands within and adjacent to the refuge.

E. Treatment Effectiveness Monitoring

Spot checking of noxious weed sites to ensure control methods are meeting management objectives. A staff person from the AMNWR will visit sites controlled every week after initial treatment; this is especially important for weed populations that are sprayed to ensure effectiveness of herbicide application. If both spring and summer/fall applications are used then visits will occur during both these times.

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
USFWS – GS-11 Biologist @ $25.80/hour x 8 hours/day x 20 days x 1 year	$4,128
TOTAL PERSONNEL SERVICE COST	$4,128
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
1 GPS unit @ $4,000	$4,000
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	$4,000
MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
TOTAL MATERIAL AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST/ITEM**
Control weeds with herbicides on 450 acres: aerial – 200 ac @ $525.00/ac x 200 ac	$105,000
Control weeds with herbicides on 450 acres: ground application, rough terrain – 160 acres @ $311.00/ac x 160 ac	$49,760
Control weeds with contract crew (20 person crew @ $3,500/day) – 30 days X $3,500/day x 1 year	$105,000
Follow up weed treatments, ground applications, ATV @ $100/ac x 100 ac	$10,000
TOTAL CONTRACT COST	$269,760

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004						
2005	Acre	$617.53	450	$277,888	ES	P,C
2006						
TOTAL	Acre	$617.53	450	$277,888	ES	P, C

F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program	ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression	P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	P, M, C
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
Appendix I – Vegetation Assessment; Appendix III – Vegetation Mortality Map, Noxious Weed Map

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Native Plantings	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	Native Plantings	**FISCAL YEAR:**	2005
ESR REFERENCE #:	6.3.2.3 Revegetation	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. General Description:

Native grasses and forbs will be hand-planted by contract crews to re-establish native vegetation within moderate to high burn severity areas. Native seed will be collected and propagated at federal and private nurseries to produce tublings for planting in fall and winter of 2004 and spring of 2005. The need for replanting and application rates was developed in consultation with the local staff from the FWS. The plantings will be conducted in conjunction with noxious weed control and is intended to reduce encroachment by non-native invasive species and protect biological diversity of plant communities and critical T&E habitats. Approximately 450 acres will be planted with native species.

B. Location (Suitable) Sites:

The areas to be replanted are within the Longstreet fire perimeter in and along historic spring/stream channels and in areas where noxious weeds have encroached. The replanting will occur mostly in the area of moderate to high vegetation. The area mostly coincides with the existing noxious weed locations. See Appendix III, Noxious Weed Map.

C. Design/Construction Specifications:

1. The species selected for replanting the burn area will include but not limited to willow, ash, mesquite, and saltgrass (alkali sacton). Seed will be collected from local species and propagated under contract with federal and private nurseries.
2. Container stock, grass plugs and willow cuttings will be planted by contract crews under the guidance of Refuge staff.
3. Application timing and completion date: Application timing will correspond to local conditions and predicted success. For fall application, plantings will be applied after the first fall or winter rains and after the fall weed treatment. If plantings cannot be implemented in the fall of 2004, then spring plantings would occur in spring of 2005.

D. Purpose of Treatment Specification:

The purpose of the treatment is to help prevent noxious weed encroachment and protect T&E species and their associated habitats. The native grass plantings are important in reducing bare ground, stabilizing plant communities, reducing spread of non-native invasives and protecting critical habitats of endemic plant species.

E. Treatment Effectiveness Monitoring

See Vegetation Monitoring Specification.

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
USFWS – GS-11 Biologist @ $25.80/hour x 8 hours/day x 20 days x 1 year	$4,128.00
TOTAL PERSONNEL SERVICE COST	$4,128.00

EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
ATV Mules for plant transport $350/ month x 2 months x 2 vehicles x 1 year	$2,800.00
Vehicle Rental- 20' container truck x $500/mo x 2 months x 1 year	$1,000.00
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	$3,800.00
MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
Plant materials- 500 plants/acre x 450 acres x $.40/plant x 1 year	$90,000.00
Native Seed- Saltgrass and saltbush native seed @ $70/lb x 20 lbs. x 1 year	$1,400
TOTAL MATERIAL AND SUPPLY COST	$91,400.00
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
Native Seed Collection- (20 person crew x $3,500/day x 5 days x 1 year	$17,500
Native Plantings- Contract Crew x $.45/plant x 225,000 plants x 1 year	$101,250
TOTAL CONTRACT COST	$118,750

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004						
2005	Acre	$484.61	450	$218,078	ES	P,C
2006						
TOTAL	Acre	$484.61	450	$218,078	ES	P, C

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SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	P, E,M, C,
3. Estimate supported by cost guides from independent sources or other federal agencies.	

4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
Appendix I – Vegetation Assessment; Appendix III – Longstreet Fire Perimeter Map.

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Vegetative Monitoring	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	Vegetation recovery, noxious weed monitoring, seeding success	**FISCAL YEAR:**	2005
ESR REFERENCE #:	6.3.2.3	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. General Description:

Monitor noxious weed treatment effects and native plantings recovery within the burned area to determine if management objectives are being met and to identify any future planting or noxious weed control needs. Plants to be monitored include saltcedar, Russian knapweed, Bassia and plantings of saltgrass, willow, and mesquite.

Monitor for new occurrences of undesirable plant species (noxious and exotic), within the burned area. Monitoring will occur in un-infested areas having a high potential for weed invasion. Monitor for success of noxious weed treatments.

Monitor for establishment of planted native grasses the first year following treatment to determine if revegetation efforts are meeting management goals.

B. Location (Suitable) Sites:

Monitoring for noxious weeds will occur in areas with potential for weed invasion and in areas that are treated for noxious weeds (see Noxious Weed Map).

Monitoring for planting success will occur in treated areas to determine success in competing with noxious weeds and reclaiming bare ground.

C. Design/Construction Specifications:

1. Establish 8 to 10 permanent transects and 3 to 5 trend photo plots to study one or more of the following: cover, height, density, frequency, and visual obstruction for individual plant species or groups of species. Line intercept can be used to measure shrub canopy cover and quadrat-sampling methods can be used to measure frequency. The method chosen will be determined by local Fish and Wildlife staff and Endangered Species Recovery Program researchers. Collect data to describe the vegetation recovery from the fire. Compare reestablishment within burn area to a control area outside of burn.
2. Prepare annual reports and a final report analyzing the data for burned and unburned sites to determine shrub cover, shrub height, and forage availability.
3. Conduct short-term monitoring on known noxious weed occurrences and in areas of potential spread within burned area to determine spread of noxious and invasive plant species. Monitoring protocols will be determined by Ash Meadows National Wildlife refuge staff.
4. Locate, map, and document (using photography, topographic maps, and Global Positioning System--GPS—technology), new weed occurrences within burned area.
5. Initiate Agency approved control measures on new weed occurrences where monitoring demonstrates the establishment or expansion of known weed populations.
6. Complete supplemental funding request for ESR funding (or cost-share through a Weed Management Area), for noxious weed control of new weed populations within the burned area.
7. For native planting areas, monitoring transects should be established to determine survival rates of planted species including healthy, sick, dead or missing plants. This data may be used to determine if additional Emergency Stabilization actions will be required.

D. Purpose of Treatment Specification:

Noxious weed and undesirable plant monitoring is required to detect new noxious weed occurrences in the burned area and to monitor known weed densities and determine the effectiveness of treatments.

Monitoring of native grass planting success and effectiveness is required to ascertain the degree of competition with undesirable plant species and determine if additional treatments are necessary to control non-native invasive species and protect ecosystem biodiversity.
E. Treatment Effectiveness Monitoring
As described in this specification. This treatment will produce a report on treatment effectiveness.

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
USFWS – GS-11 Biologist @ $25.80/hour x 8 hours/day x 20 days x 1 year	$4,128
USFWS – GS-5 Biological Technician @ $12.79/day x 10 hours/day x 20 days x 1 year	$2,558
TOTAL PERSONNEL SERVICE COST	$6,686
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
1 Digital camera @ $400.00	$650
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	$650
MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
Field supplies (rebar, fence posts, measuring tape, monitoring frames, flagging, etc) and office supplies (paper, computer discs, pencils, etc)	$2,000
TOTAL MATERIAL AND SUPPLY COST	$2,000
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
Monitoring Contract for data acquisition, data management and reports- Journeyman Botanist @ $400/day x 45 days x 1 year	$18,000
TOTAL CONTRACT COST	$18,000

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004						
2005	Surveys	$781.02	35	$27,336	ES	P,C
2006						
TOTAL	Surveys	$781.02	35	$27,336	ES	P,C

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SOURCE OF COST ESTIMATES

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2. Documented cost figures from similar project work obtained from local agency sources.	P, M, C
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
Appendix I – Vegetation Assessment; Appendix III – Vegetation Mortality Map, Noxious Weed Map

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	Cultural Resources Protection	**JURSIDICTIONS:**	FWS-AMNWR
PART E: LINE ITEM:	C-1, Resource Protection	**FISCAL YEAR:**	2004-2005
ESR REFERENCE #:	6.3.1 Cultural Resources Protection	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. General Description:

Looting and vandalism is known to occur within the refuge. Reduced ground cover as the result of fire effects expose cultural resources locations to increased risk from such activities. Such risks can be minimized through law enforcement patrols on selected sites and enforcement of area closures. Law enforcement officer shall have authority to take action on artifact collectors and looters.

Pursuant to Section 106 of the National Historic Preservation Act, as amended (NHPA), federal undertakings that may affect Historic Properties require the lead agency to consult with affected tribes as equal partners. Therefore, local tribes must be consulted concerning any effects that may occur on Historic Properties of Native American origin that are located within re-vegetation treatment areas. Additionally, a professional archaeologist, meeting the Secretary's standards shall provide oversight to ensure the lead federal agency (FWS), has met its obligations under the NHPA.

B. Location (Suitable) Sites:

Historic Properties within the Longstreet Fire Re-vegetation treatment areas. Such locations are exempt from public disclosure under the Archaeological Resources Protection Act of 1979 (ARPA), and the Freedom of Information Act (FOIA) The FWS maintains its own records on the location of sensitive cultural resources, and will provide, as necessary such information to law enforcement officers, tribal consultants, and the professional archaeologist having oversight for compliance with the implementing regulations under the NHPA.

C. Design/Construction Specifications:

1. Coordinate law enforcement patrols with refuge management and FWS archaeologist
2. Undertake systematic and discretionary patrols, make contact as appropriate, and take action against violators.
3. Consult with affected tribes
4. Complete Section 106 compliance requirements.

D. Purpose of Treatment Specification:

Enforce area closures, and to protect exposed, sensitive cultural resources and deter looters. Special attention will be given to resources that are known to be subject to active looting. Patrols should continue until public interest decreases, and re-growth has served to obscure previously exposed artifacts and features (6 months).

Tribal consultation will occur as part of the Section 106 process. The professional archaeologist, in charge, shall ensure that such consultation meets the implementing regulations under the NHPA, and that the FWS is in full compliance with Section 106 for this federal undertaking.

E. Treatment Effectiveness Monitoring

Refuge staff will monitor for effectiveness of law enforcement efforts to dissuade looting and vandalism.

SHPO concurrence shall suffice to demonstrate FWS has met its requirement for tribal consultation and compliance with Section 106 of the NHPA.

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
Law enforcement officer GS-11 @ $19.23/HR X 1040 Hours X .5 Fiscal Years =	$20,000
Archaeologist GS-11 @ $19.23/HR X 120 Hours X .058 Fiscal Years =	$2,308
TOTAL PERSONNEL SERVICE COST	$22,308
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
N/A	
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	
MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
N/A	
TOTAL MATERIAL AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
Lead Archaeologist @ $1,500. X 2 Round Trips X 1 Fiscal Year =	$3,000
TOTAL TRAVEL COST	$3,000
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
Tribal consultation	$500
TOTAL CONTRACT COST	$500

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004	Acres	$64.52	400	$25,808	ES	P/C
2005	Acres	$64.52	400	$20,808	ES	P/C
2006						
TOTAL	Acres	$64.52	400	$25,808	ES	P/C

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SOURCE OF COST ESTIMATES

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1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	C
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	P/T
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
See Cultural Resources Assessment, Appendix I.

U.S. FISH & WILDLIFE SERVICE
BURNED AREA EMERGENCY STABILIZATION PLAN

PART F - SPECIFICATION

SPECIFICATION TITLE:	IMPLEMENTATION LEADER	**JURSIDICTIONS:**	FWS
PART E: LINE ITEM:	0-1 IMPLEMENTATION LEADER	**FISCAL YEAR:**	2004 -2005
ESR REFERENCE #:	8.5 Project Management	**SPECIFICATION TYPE:**	ES

WORK TO BE DONE

A. Provide a Brief General Description of Treatment

Hire Implementation Leader for 12 months to develop contract specifications, monitor contractor performance, and complete project accomplishments. Hire Administrative Assistant to process contract, maintain project documentation, and track expenditures.

B. Describe Specific Treatment Location or General Description of Suitable Sites for Treatment

See other treatments.

C. Provide and Number Detailed Design/Construction Specifications

1. Implementation Leader will coordinate all aspects of emergency stabilization including administering contracts, documentation of treatments installed, providing accomplishment report, submitting supplemental requests for funding, ensuring the completion of all approved treatments, and coordinating treatments with other agencies and private landowners.

2. Implementation Leader will coordinate on-the-ground implementation of treatments including site orientation of contractors, developing daily/weekly work plans for contractors/crews, and supervising work.

3. At completion of the funding period the implementation leader will prepare a final accomplishment report

D. Describe Purpose of Treatment Specification – What Resource will be Protected

The implementation leader will develop contract specifications, coordinate contractor access to remote closed refuge property, coordinate all aspects of project implementation, inspect subcontractor work, and report accomplishments.

E. Describe Treatment Effectiveness Monitoring

N/A

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
Administrative Assistant GS-5 @ $1,272 per month X 12 months	$15,264
TOTAL PERSONNEL SERVICE COST	$15,264
EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	**COST/ITEM**
Misc. equipment rental @ $5,000	$5,000
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	$5,000

MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	**COST/ITEM**
Misc. materials and supplies @ $3,000	$3,000
TOTAL MATERIAL AND SUPPLY COST	$3,000
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	**COST /ITEM**
Hire Contracted Implementation Leader for 12 month period to manage all aspects of noxious weed control, habitat plantings, and accomplishment reporting for these emergency stabilization treatments	$58,000
TOTAL CONTRACT COST	$58,000

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004	Months	$6,772	1	$6,772	ES	C
2005	Months	$6,772	11	$74,492	ES	C
2006	-	-	-	-	-	-
TOTAL	Months	$6,772	12	$81,264	ES	C

FUNDING SOURCES	SPECIFICATION TYPE	METHOD OF COMPLETION
F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program	ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression	P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATES

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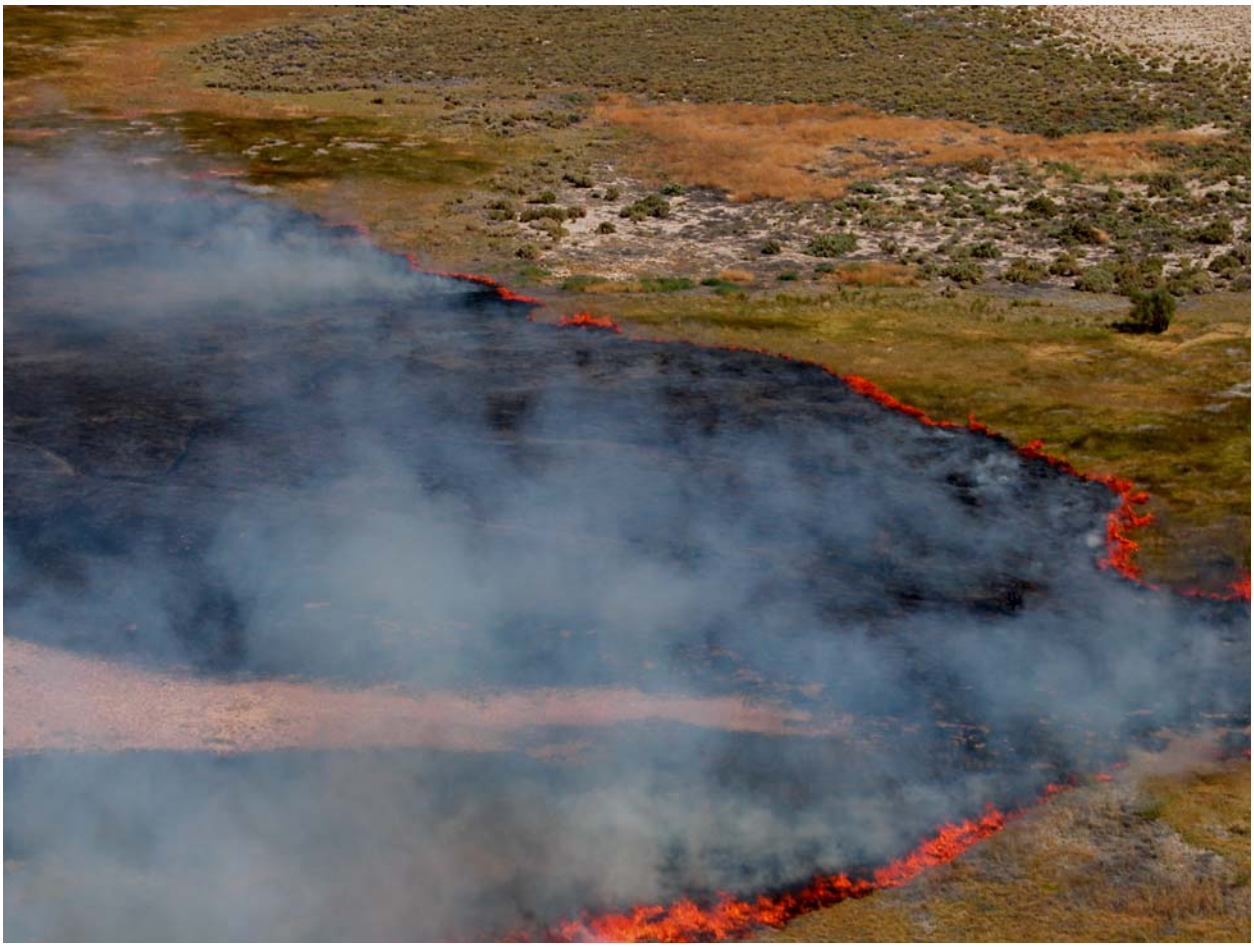
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	C/P
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
See Executive Summary and Other Treatment Specifications

APPENDIX I – RESOURCE ASSESSMENTS



INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN
LONGSTREET FIRE

OPERATIONS ASSESSMENT

I. OBJECTIVES

- Identify, inventory, and map fire and suppression impacts for the Longstreet Fire on the Ash Meadows National Wildlife Refuge.
- Prescribe measures to mitigate fire and suppression impacts.
- Coordinate with Fire Incident Management Team to implement emergency stabilization treatments to protect human health and safety, and sensitive resources.
- Protect cultural and natural resources during rehabilitation efforts.
- Inform and update the Refuge Staff on matters pertaining to the Burned Area Emergency Response Team.

II. ISSUES

- Important cultural and natural resources.
- Extensive soil disturbance to highly erodible soils from fire suppression activities.
- Urgent need to immediately implement short-term emergency stabilization treatments to protect watershed resources and reduce risk to human health and safety.
- Effects of emergency stabilization and rehabilitation treatments to T&E species and Refuge resources.

III. OBSERVATIONS

The Longstreet Fire on the Ash Meadows National Wildlife Refuge was started by lightning on August 1, 2004 at approximately 1600 hours. The fire burned through approximately 1,630 acres between August 1st and August 3rd 2004, on BLM, Private and Ash Meadows National Wildlife Refuge lands. Pushed by winds of 20-25 miles per hour, the fire quickly spread from southwest to northeast up the Carson Slough to the Imvite Road where it was eventually stopped by suppression forces. The Fire was a Type 3 Incident with Lee Nelson as Incident Commander. At the peak of activity there were 46 personnel on the fire. The Fire transitioned to a type 4 Incident on August 4, 2004.

The fire was contained on August 3, 2004 at 1800 hours, and controlled on August 4, 2004 at 1800 hours. No dozer lines were constructed to suppress the fire on Refuge land, although some heavy equipment work was completed around structures on the private land. Two handlines of approximately 872 feet were constructed near Longstreet and Roger Springs. Backfire operations were conducted on August 1 and 2 across approximately 37.4 acres (see Impacts map). Additional suppression impacts included use of 15.1 miles of existing roads, 2 helibases with one on private land, and the Incident Command Post that was also located on private land. Two retardant drops were applied to protect the private property in the middle of the fire area; no waterways were impacted. A helicopter dropped water on the fire area, with water obtained from

a pond on private land designated by Refuge personnel as free from impacts to federally listed species.

Within the 1,630 acre burn area, fire effects to the vegetation varied and were mapped High, Moderate and Low vegetation mortality.

VEGETATION MORTALITY OR TOP KILL	ACRES
HIGH 60-100%	270
MODERATE 26-60%	575
LOW 0-25%	785
TOTAL	1,630 acres

Reconnaissance Methodology and Results

On August 4, 2004 a Burned Area Emergency Response (BAER) Team arrived and began evaluating resource impacts caused by fire and suppression actions. Operations looked at the location of all suppression impacts including handlines, backfires, road damage, as well as assessed the degree of resource impacts, and finally prescribing treatment to rehabilitate the sites. Information was gathered from field reconnaissance by BAER Team personnel, interviews with Fire personnel, and exchange of information with Refuge staff.

Rehabilitation treatments for handlines, road damage, fence damage, and powerpole removal were developed and then reviewed by local agency representatives before implementation.

The table below summarizes the fire suppression impacts for reservation lands.

Fire/Suppression Impacts	Treatments Completed or In-Progress
System Roads damaged by Suppression	Rehabilitate 15.2 miles
Fence Repair/Removal	Remove/Repair 25 miles
Sign damage	Replace 40 signs
Handline	Rehabilitate 872 feet

Treatments are being directed in a cooperative effort with incident and agency personnel and BAER team resource advisors. Rehabilitation of handlines and suppression damaged roads are designed to restore soil to natural contours and to prevent slope erosion.

As of August 6, 2004 all handlines have been rehabilitated. Roads damaged from fire suppression actions will be rehabilitate to correct drainage road surfaces and restored to pre-fire conditions. See Appendix III, Fire Suppression Impacts Map for suppression lines, and road rehabilitation locations.

Findings

The current status of suppression lines and suppression impacted road rehabilitation as of 08/6/04 is as follows:

Handlines: Hand line rehabilitation was completed on August 6, 2004.

Suppression access road: Restoration of the 15.2 miles of roads impacted by fire suppression efforts is underway and will likely be completed by December 2004.

IV. RECOMMENDATIONS

1. Management (Specification Related)

- Power Pole Removal. Remove 1.25 miles of burned powerpoles and associated cross arms and wire in the fire area which now pose a safety hazard to the public. (BAER Spec I-2, Power Pole Removal).

- Road Rehabilitation. Continue rehabilitation of roads impacted by fire suppression actions (BAER Spec. S-1 Road Rehabilitation).

- Fence Repair/Removal. Repair Refuge boundary fence and remove burned interior fence which now poses a safety hazard to the public. (BAER Spec I-1, Fence Repair/Removal).

- Safety/Resource Protection Sign Replacement. Replace 40 public safety and resource protection signs impacted by the fire (BAER Spec I-3, Safety/Resource Protection Signs).

2. Management (Non-Specification Related)

- Insure rehabilitation specifications involving treatments are clearly understood by new personnel assigned to the incident.

- Guarantee safety of personnel assigned to operational assignments in the fire area during stabilization activities.

- Continue to provide current up-to-date information to the affected public.

V. CONSULTATIONS

Personal Communication with:

- Lee Nielson - Incident Commander
- Michelle Martin – Type 4 Incident Commander
- Ron Matheny- Private Land Owner
- Mark Ingram – Helitak Forman
- Cristi Baldino- Refuge Biologist
- Lee Talbot- Refuge Maintenance
- Mark James – Refuge Vegetation Specialist

Gavin Lovell-Fire/Fuels Specialist, Wyoming BLM, Kemmerer Field Office 307-828-4512

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN
LONGSTREET FIRE
CULTURAL RESOURCE ASSESSMENT

I. OBJECTIVES

- Assess damages to known cultural resources as the result of fire behavior
- Assess damages to known cultural resources as the result of fire suppression activities
- Assess potential risks to known cultural resources as the result from the effects of fire (e.g. erosion, flooding, and exposure to looting and/or vandalism.
- Assess potential risks to known cultural resources as the result of emergency stabilization activities.

II. ISSUES

Are cultural resources known to exist within the fire perimeter? If so, have these resources been subject to direct or indirect effects of fire? What are the requirements for emergency stabilization and/or protection? Do proposed emergency stabilization measures for other resources pose a risk to known cultural resources? If so, what measures may be employed to mitigate adverse effects to those resources?

III. OBSERVATIONS

A. Cultural Overview

According to a report prepared in conjunction with the rehabilitation effort on the Carson Slough Fire of 2000 (Parks, Speulda, and Raymond, 2002), the abundant plant and animal life supported by the springs and seeps of Ash Meadows has attracted human populations for at least 4000 years. The Desert Culture as typified throughout much of the Great Basin was expressed by a nomadic lifestyle attuned to a seasonal round that enabled exploitation of a diverse range of resources In the period leading up to the Euro-American presence in the in the mid-nineteenth century, Ash Meadows and the surrounding region was occupied by small bands of hunter-gatherers, including both the Southern Paiute and Western Shoshone cultures. Euro-American settlement of the area brought in mining and agricultural activities as well as the development of a railroad. Two noteworthy persons of historical significance are associated with the area consumed by the Longstreet Fire. Andrew Jackson "Jack" Longstreet, settled next to a spring that now bears his name in 1894. There he built a dugout cabin constructed of local rock. Longstreet is known for his exploits as a hired gun, back country guide, and a strong supporter of Indian rights. Longstreet left the area in 1899 and sold the cabin in 1906. The cabin was still standing into the 1980s, but has since collapsed. It was nominated to the National Register of Historic Places (NRHP) in 1991 and is currently undergoing reconstruction. Settling alongside a spring that also bears his name, Ralph "Dad" Fairbanks operated a tent hotel and mercantile. His business, established around 1904 served the needs of those connected with railroad construction and the mining industry. With the 20th century came additional settlement of the Ash Meadows area and is demonstrated by the presence of still standing cabins and scatters of historic refuse. Irrigated agriculture was practiced throughout portions of the twentieth century and continued on some private in-holdings after establishment of the AMNWR in 1984.

B. Previous Studies within the Ash Meadows National Wildlife Refuge

Six cultural resources studies have been conducted within or nearby the AMNWR beginning in 1964 and concluding with the inventory noted in the preceding section, and conducted as part of the Carson Slough Fire Rehabilitation Project in 2001. These studies resulted in the identification of sixteen (16) cultural resources sites within a one-mile perimeter of the Longstreet Fire burn area. These resources include: seven (7) prehistoric sites, five (5) historic sites, two (2) sites

containing both prehistoric and historic constituents, and two (2) sites, of which documentation was not available at the time of this writing to specify temporal affiliation. Approximately 80 of the 1630 acres that comprise the burn area have been the subject of previous cultural resources investigations. There has not to this date, been a comprehensive cultural resources inventory undertaken for the AMNWR.

C. Reconnaissance Methodology

A pedestrian reconnaissance survey was performed to address the issues and objectives set forth above. This survey was preceded by a review of the existing literature and records concerning known cultural resources locations within the AMNWR. Once resource locations were established, they were plotted over the fire perimeter map. Those sites that fell within the fire perimeter and that were previously evaluated as eligible for inclusion to the NRHP (Historic Propertied) were prioritized as target locations for inspection. Global Positioning System (GPS) technology was applied in combination with the descriptions and sketch maps included with the site records to navigate to some site locations. Other sites were located with the assistance of refuge staff. In addition to the relocation of high priority sites within the burn area, an intensive pedestrian survey was conducted along the 872 linear feet of hand line that was cut during fire suppression efforts.

D. Findings

Reconnaissance survey results demonstrate that eight previously recorded sites occur within the perimeter of the Longstreet Fire.

Site #	Site Type	Condition
26NY1727	Historic Cabin	Destroyed by fire
26NY5857	Unknown	Unknown
26NY1770	Prehistoric Lithic Scatter?	Fair, some disturbance
26NY1771	Unknown	Unknown
26NY1735	Prehistoric Lithic/Ceramic Scatter	Good
26NY11502	Prehistoric Lithic Scatter	Unknown
26NY11504	Historic Cabin	Destroyed by 2000 fire
26NY1729	Prehistoric Lithic Scatter/Historic refuse/features assoc/w “Dad” Fairbanks establishment	Good

Four of these eight sites (26NY1727, 26NY1735, 26NY1729, and 26NY1770) were relocated during the reconnaissance survey. 26NY1727, a four-room historic cabin constructed of railroad ties and milled lumber, and originally recorded in 1989, was completely consumed by the Longstreet Fire. The fire intersects a portion of 26NY1735. This site is a large prehistoric artifact scatter. There are no post fire effects anticipated, with the exception of an increased risk from looting and vandalism until such time that re-growth occurs in the burn area. However the site is to be monitored in conjunction with re-vegetation that is to occur along the channel that flows out of the Longstreet Spring. Site 26NY1729 was also partially burned over, as it was during the previous fire event in 2000. No post-fire effects are anticipated, with the exception of increased risk of looting and vandalism as noted above. As noted above, monitoring will occur in areas surrounding the spring that will be subject to re-vegetation efforts. An attempt to relocate site 26NY1770 resulted in the identification of a widely dispersed lithic scatter located in disturbed dune deposits west of Cold Springs. There are no re-vegetation plans for this area.

Fire suppression efforts resulted in very little ground disturbance. A total of 872 linear feet of hand line was cut. The largest of these, a 721 feet swatch with a width of about three feet was cut along the north side of the levee west of Rogers Spring. The second transect is a 151 feet piece of line that was cut perpendicular to the channel that runs west from Longstreet Spring. This line was cut in an effort to preserve the riparian habitat around the spring. This segment lies within a portion of site 26NY1735. An intensive pedestrian survey of both hand line segments demonstrates that no cultural resources were affected by this suppression activity.

During the reconnaissance survey to evaluate the remains of 26NY1727, two previously unrecorded sites were identified, both of which lie outside of the burn area. Site Longstreet-1 is a

small dense lithic scatter composed of a high diversity of chipped stone debitage, including chert, quartzite, obsidian, and rhyolite. Two end scraper/awls, and three hammerstones are included in the artifact assemblage. The second site, temporarily designated as Longstreet-2, is a historic cabin and associated features including a privy, and several rock alignments/concentrations of imported volcanic cobbles. The cabin is a one-room structure constructed of milled lumber and railroad ties. It was constructed to take advantage of winter solar radiation. There were very few artifacts noted, with the exception of a fuel drum, a glass jug base, and a modern screw-top glass bottle. A single large quartzite flake was found just to the east of the cabin entry.

IV. RECOMMENDATIONS

A. Emergency Stabilization Specification

C-1 Resource Protection: Looting and vandalism is known to occur on cultural resources within the AMNWR. Ground cover reduced as the result of fire effects expose cultural resources locations to increased risk from such activities. Such risks can be minimized through law enforcement patrols on selected sites and enforcement of area closures. The law enforcement officer shall have authority to take action on artifact collectors and looters.

Pursuant to Section 106 of the National Historic Preservation Act, as amended (NHPA), federal undertakings that may affect Historic Properties require the lead agency to consult with affected tribes as equal partners. Therefore, local tribes must be consulted concerning any effects that may occur on Historic Properties of Native American origin that are located within re-vegetation treatment areas. Additionally, a professional archaeologist, meeting the Secretary's standards shall provide oversight to ensure the lead federal agency (FWS), has met its obligations under the NHPA.

Two sites are located in areas that will be subject to re-vegetation efforts. These sites include the large multi-component (prehistoric/historic) site located at Fairbank Spring (26-NV-1729), and the large prehistoric lithic scatter located to the west of Longstreet Spring (26-NY-1735).

B. Management Recommendations (Non-Specification Related)

While wildland fire has the potential to adversely effect cultural resources, it also offers the unique opportunity to perform inventories in areas that were previously inaccessible. Additionally, in areas where fire has effectively removed the ground cover, archaeological sites may be exposed that were not previously visible on the surface. Given these conditions, the following non-specification recommendation is offered:

- A systematic and comprehensive cultural resources inventory should be carried out within the burn area.
- Site Longstreet-2 should be fully documented given the probability that a future fire event may mean its demise, as was the case with 26NY1727.

V. CONSULTATIONS

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Karla Burnside, Archaeologist, U.S. Fish and Wildlife Service, Malheur NWR, 36391 Sodhouse Lane, Princeton, Oregon 97721

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Cristi R. Baldino, Wildlife Biologist, Ash Meadows NWR, HCR70, Box 610-Z, Amargosa Valley, Nevada 89020

VI. REFERENCE

Parks, Virginia, Lou Ann Speulda, and Anan Raymond
2002 Ash Meadows National Wildlife Refuge *Cultural Resources Inventory for the Carson Slough 2000 Fire Rehabilitation Project*

H. Dan Hall, Regional Archeologist, Bureau of Indian Affairs, Pacific Region, (916) 978-6041

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN
LONGSTREET FIRE

WILDLIFE RESOURCE ASSESSMENT

I. OBJECTIVES

- Assess effects of the fire and suppression actions to Federally listed Threatened, and Endangered species and their habitats.
- Conduct Section 7 Emergency Consultation with the U. S. Fish and Wildlife Service.
- Prescribe emergency rehabilitation measures and/or monitoring.
- Assess effects of proposed rehabilitation actions to listed species and habitats.

II. ISSUES

- Three Federally listed species and/or habitat areas occur within the fire area.
- One Federally listed species was affected by fire suppression actions.

III. OBSERVATIONS

A. Background

The Longstreet fire burned approximately 1,630 acres of the Ash Meadow National Wildlife Refuge (AMNWR) between August 1 and August 4, 2004. The fire began at approximately 1600 hours as the result of a lightening strike on the west side of the AMNWR. Pushed by winds of 20-25 miles per hour, the fire quickly spread from southwest to northeast up the Carson Slough to the Imvite Road where it was eventually stopped by suppression forces. One interesting note on the fire behavior is that it burned against the wind as well as with it. This is thought to be caused by the heavy loading and continuous arrangement of the various grasses, forbs and rushes that occur within the fire area. The fire was contained at 1800 hours on August 3 and controlled at 1800 hours on August 4. Approximately 1,525 acres within the fire perimeter are managed by AMNWR; 66 acres by BLM, and 39 acres are privately owned.

No dozer lines were constructed to suppress the fire on the AMNWR. Some grader clearing of vegetation around structures occurred on the private land. Two fire lines of approximately 872 feet total were constructed by hand near Longstreet and Roger Springs. Backfire operations were conducted on August 1 and 2 across approximately 37.4 acres (see Fire Impacts map). Additional suppression actions included use of 15.1 miles of existing roads, 2 helibases with one on private land, and the Incident Command Post that was also located on private land. Two retardant drops were applied to protect the private property in the middle of the fire area; no waterways were impacted. A helicopter dropped water on the fire area. Water was obtained from a pond on private land that was designated by AMNWR personnel as free from impacts to federally listed species.

Within the 1,630 acre burn area, fire effects to the vegetation were mapped High, Moderate and Low. The Vegetation Mortality Map illustrates the spatial relationship between these areas.

VEGETATION MORTALITY OR TOP KILL	ACRES
HIGH 60-100%	270
MODERATE 26-60%	575
LOW 0-25%	785
TOTAL	1,630 acres

The AMNWR is located in the Amargosa Desert of southwestern Nevada. The regional climate is arid, with an average annual precipitation of less than 5.0 inches. Nearly two-thirds of the annual precipitation falls between November and March. The average maximum summer temperature exceeds 100 degrees Fahrenheit during July and August. Average minimum temperatures fall below freezing only during the months of December and January. The AMNWR is generally characterized by gently sloping surface deposits covering a broad valley floor. Elevation within the fire area is approximately 2,200 feet above sea level.

The AMNWR has many aquatic and wetland environments as the result of the discharges of a complex, regional groundwater sytem. Discharge from the aquifer creates over 30 springs and pools on the refuge. Four springs were affected by the Longstreet Fire.

Common wildlife of the AMNWR include those species typical of warm-temperate deserts and riparian scrublands of the Mohavian Biogeographic Province. Due to water impoundments on the AMNWR, some open water and interior marshland species are also present. Five federally listed animal species occur on the refuge, most of which are endemic to the AMNWR.

B. Reconnaissance Methodology and Results

Information for this assessment is based on a review of relevant literature, AMNWR wildlife sighting and habitat inventory information, consultation with U. S. Fish and Wildlife Service, and personal communication with AMNWR and management personnel. Information on the effects of the fire came from interviews with fire suppression personnel and fire area reconnaissance on August 5 and 6, including a helicopter flight over the fire area on August 5. To better understand the species and habitat information briefly discussed in this wildlife assessment, it is important to review the Longstreet Fire BAER Vegetation Assessment. That report contains more detailed descriptions of pre-fire vegetation and post fire vegetative recovery estimates.

The purpose of this assessment is to discuss the potential effects of fire, suppression actions and proposed emergency rehabilitation activities to federally listed species. Only a few of the total array of species that may occur in the area are discussed in this report. The list of species to be addressed was developed from documents referenced in this report and input from AMNWR and FWS Biologists.

This assessment is not intended to definitively answer the many specific species effects questions that are inevitably raised during an incident such as the Longstreet Fire. The only focus of this assessment is to determine the potential for immediate, emergency actions that may be necessary to prevent further impacts to federally listed species occurring on AMNWR lands.

C. Findings

1. Biological Assessment for Federally Listed Species

Direct effects as described in this report refer to individual mortality, or disturbance that results in flushing, displacement or harassment of the animal. Indirect effects refer to modification of habitat and/or prey species and possible subsequent affects to the species.

SOUTHWESTERN WILLOW FLYCATCHER: The southwestern willow flycatcher is a neotropical migratory land bird that breeds in riparian habitat. The willow flycatchers that nest within the fire area winter in Costa Rica. Nesting occurs in tamarisk trees within the Carson Slough. Surveys indicate that successful nesting occurred in 1999, 2001, 2002, and 2004. 2004 surveys indicate that the willow flycatchers had fledged one young approximately one week before the Longstreet Fire occurred. There is no designated Critical Habitat within the fire area.

DIRECT EFFECTS: The willow flycatchers within the fire area could have flown away as the fire approached. Because the fire is relatively small and linear (affected habitat is narrow in width), and

there is some suitable perching habitat adjacent to the fire area along spring outflows and water channels, they may have found refuge and stayed in that area or returned to the fire area once the flames died down and the smoke cleared. It is thought that the fledged young was old enough to fly out of the fire's path.

INDIRECT EFFECTS: The tamarisk trees where the willow flycatchers nested were reduced to charred stems. These trees will resprout if left to naturally regenerate after the fire. Because about 80 percent of the riparian vegetation thought to be used by willow flycatcher was impacted by the fire, the birds may have limited nesting opportunities for the next several years until the vegetation grows tall enough to support nests. Post fire invasion of the tamarisk and other non native species is also a concern. If left untreated, the non native species will out compete and quickly replace any resprouting native riparian vegetation.

POST FIRE OBSERVATIONS: No willow flycatchers were seen or heard during post fire reconnaissance.

DEVIL'S HOLE PUPFISH: The Devil's hole pupfish occurs naturally in only one limestone cave adjacent to the AMNWR. The area burned by the Longstreet Fire includes a portion of the Critical Habitat designated for this species.

DIRECT EFFECTS: There were no direct effects from the fire, suppression or proposed emergency rehabilitation actions to the Devil's Hole pupfish.

INDIRECT EFFECTS: The Critical Habitat for this species was primarily designated to protect ground water that feeds the pupfish habitat. There were no adverse modifications to ground water as a result of this fire. Therefore there are no effects to the Critical Habitat for this species.

POST FIRE OBSERVATIONS: No Devil's Hole pupfish were observed during post fire reconnaissance.

ASH MEADOWS AMARGOSA PUPFISH: This species occupies numerous springs and associated outflow streams within the AMNWR. It is endemic to this area. Approximately 420 acres of designated Critical Habitat were affected by the Longstreet Fire.

DIRECT EFFECTS: Because this species was present in the springs and waterways within the fire area, it is thought that the fire may have negatively impacted individual pupfish. Where pupfish occurred in shallow water, the flames may have cause the water to evaporate, thus causing mortality of animals dependent on that water. The flames may have heated the water to a high enough temperature that would cause severe stress to the pupfish and subsequent mortality. If pupfish were isolated into small water pockets due to water evaporation and vegetation shifts, they may have had too little water to provide enough oxygen and perished due to depletion of oxygen in the water. Because there were strong winds associated with the fire, ash from burned vegetation may have blown into the occupied water causing a sudden, fatal change in water pH. Loss of vegetation adjacent to the springs and waterways means a loss of hiding cover and subsequent potential for increased predation. There are only a few known egrets, mergansers and other birds that prey on pupfish occurring on the AMNWR and none were reported to have been observed during the fire and post fire reconnaissance.

INDIRECT EFFECTS: The Cold Spring stream channel was diverted by suppression forces approximately 150 feet below the spring on August 2 to allow the water to flow over the area directly adjacent to the stream and suppress the openly burning flames. The breach in the channel was repaired on August 3 and no additional water was used from that spring for suppression actions. Although no pupfish were observed in the stream until about 400 feet below the spring, there may have been pupfish present in the water that was diverted. Those fish would have been lost as the water flowed out of the stream. Diversion of the water also may have exacerbated the effects

discussed above. This 24 hour diversion of stream water at Cold Spring also affected the Critical Habitat associated with that spring.

POST FIRE OBSERVATIONS: Numerous Ash Meadows Amargosa pupfish were observed in the springs and waterways within the fire area during post fire reconnaissance.

2. Other Species of Importance

The Ash Meadows vole was last seen in the AMNWR in the 1930's and is presumed to be extinct. This species is endemic to the AMNWR. The Longstreet Fire includes the type locality where the species was first described and collected. There have been several undocumented sightings within the refuge and it is listed as a Species of Concern by FWS. No surveys have been conducted. The Longstreet Fire burned through suitable Ash Meadows vole habitat. The voles build nests in vegetation above the ground and are closely associated with water. Because voles do not burrow, if they were present during the fire, they may have fled into a water course. Existing nests were probably removed by the fire, and foraging opportunities were temporarily reduced.

LONGSTREET FIRE SPECIES LIST

A species list was obtained from the U. S. Fish and Wildlife Service, Southern Nevada Field Office, on August 5, 2004. Cristi Baldino, AMNWR Wildlife Biologist, reviewed the list on August 5 for accuracy, and to determine which species or Critical Habitats may occur within the fire area. The list was again reviewed on August 6, 2004, by Shawn Goodchild, FWS Biologist to finalize the species to address, discuss those that are not addressed, and why. The following federally listed species occur, or have habitat within the fire area, or were potentially affected by fire suppression actions:

SPECIES	SCIENTIFIC NAME	LISTING STATUS
Southwestern willow flycatcher	*Empidonax trailii extimus*	E
Devil's Hole pupfish & Critical Habitat	*Cyprinodon diabolis*	E
Ash Meadows Amargosa pupfish & Critical Habitat	*Cyprinodon nevadensis mionectes*	E

The following species were identified by the FWS as potentially occurring within or near the Ash Meadows National Wildlife Refuge. Through post fire reconnaissance and consultation with local experts, it was determined that these species or their Critical Habitat were not affected by the fire (no habitat within or adjacent to the fire area and/or inventories prior to the fire determined absence), or expected to be affected by potential post-fire flooding.

SPECIES	**SCIENTIFIC NAME**	**LISTING STATUS**	**REASON FOR NOT ADDRESSING SPECIES IN THIS REPORT**
Bald eagle	*Haliaeetus leucocephalus*	T	No habitat within fire area.
Yuma clapper rail	*Rallus longirostris yumanensis*	E	No habitat within fire area.
Desert tortoise	*Gopherus agassizii*	T	No habitat within fire area.
Warm Springs Amargosa pupfish	*Cyprinodon nevadensis pectoralis*	E	No habitat within fire area.
Ash Meadows speckled dace	*Rhinichthys osculus nevadensis*	E	No habitat within fire area.
Ash meadows naucorid	*Ambrysus amargosus*	T	No habitat within fire area.

E = Endangered
T = Threatened

IV. RECOMMENDATIONS

A. Fire Suppression Rehabilitation

1. Repair Cold Spring stream diversion.

B. Emergency Stabilization

1. Management: none

2. Monitoring : none

C. Rehabilitation

1. Management: none

2. Monitoring: none

D. Management Recommendations (non-specification related)

1. It was determined that one population of the Ash Meadows Amargosa pupfish and the associated Critical Habitat were significantly affected by suppression actions. Emergency rehabilitation efforts described in this BAER report are not expected to adversely affect any of these species. However, the timing of herbicide application must be discussed with FWS with regards to potential affects to the southwestern willow flycatcher. Recommendations proposed in the BAER Vegetation Assessment, if implemented in a timely manner, should mitigate negative fire effects, to some extent, for all species found within the fire area. The determinations documented in this report should be reassessed, and consultation conducted as needed, if additional rehabilitation measures or vegetation management activities are proposed after August 7, 2004. If non-emergency vegetation management activities are proposed for long-term rehabilitation and restoration of the fire area, another Biological Assessment should be prepared.
2. Emergency consultation should be completed by an AMNWR Biologist.

DETERMINATIONS OF EFFECT TO THREATENED SPECIES

SOUTHWESTERN WILLOW FLYCATCHER

FIRE EFFECTS: Nesting habitat was removed by the fire. The two adults and fledged young may have perished, or were flushed by the fire.

SUPPRESSION ACTION EFFECTS: No suppression actions affected the willow flycatchers or their habitat. Therefore the determination of suppression effects to southwestern willow flycatcher is **no effect.**

PROPOSED EMERGENCY STABILIZATION ACTION EFFECTS: With one exception, all of the suppression rehabilitation and emergency rehabilitation actions will have no effect to willow flycatchers and their habitat. The exception is application of herbicides. At the time of report completion, the details on timing, method and type of herbicides to be applied was not known. Depending on when the herbicide is applied and where, there may be negative effects to southwestern willow flycatcher. This determination will be made after plans for herbicide application are completed.

DEVIL'S HOLE PUPFISH

FIRE EFFECTS: No Devil's Hole pupfish or ground level habitat were within the area affected by the fire. The 470 acres of Critical habitat occur within the fire perimeter. Because there were no adverse modifications to ground water, it is thought that the fire had no effect on the Critical Habitat.

SUPPRESSION ACTION EFFECTS: Suppression actions did not effect Devil's Hole pupfish or Critical Habitat ground water. Therefore the determination is **no effect.**

PROPOSED EMERGENCY STABILIZATION ACTION EFFECTS: All of the proposed suppression and burn area rehabilitation measures should have no effect on the Devil's Hole pupfish and its habitat. Therefore, the determination is **no effect.**

ASH MEADOWS AMARGOSA PUPFISH

FIRE EFFECTS: This species and its habitat was negatively affected by the fire. Approximately 31 acres of Critical Habitat were impacted by the fire.

SUPPRESSION ACTION EFFECTS: The 24 hour diversion of stream water at Cold Spring may have caused mortality to pupfish and affected the Critical Habitat associated with that spring. Therefore, the determination for suppression effects to Ash Meadows Amargosa Pupfish is **may affect, likely to adversely effect.**

PROPOSED EMERGENCY STABILIZATION ACTION EFFECTS: All of the proposed suppression and burn area rehabilitation measures should have no effect or a beneficial effect to the Ash Meadow Amargosa pupfish and its habitat. All herbicide applications will follow guidelines to protect aquatic habitats. Therefore, the determination is **no effect.**

SUPPRESSION AND EMERGENCY REHABILITATION MEASURES (detailed information documented in Specifications, Part F)

SUPPRESSION REHABILITATION ACTIONS
Repair 4 pullouts
Repair 1 parking/turnaround area near Cold Spring
Rehabilitate hand line
Grade roads used by suppression forces
Repair water diversion at Cold Spring

BURN AREA EMERGENCY TREATMENTS
Noxious weed monitoring and treatment
Native vegetation planting and monitoring
Fence replacement
Replace AMNWR signs
Power line removal (poles and wire)

V. CONSULTATIONS

NAME, AGENCY, TITLE	**TELEPHONE**
Cristi Baldino, AMNWR Wildlife Biologist	775-372-5435
Shawn Goodchild, FWS Biologist	702-515-5230
Sharon McKelvey, AMNWR Refuge Manager	775-372-5435

VI. REFERENCES

U.S. Fish and Wildlife Service, Ash Meadows National Wildlife Refuge August 2000 Wildfire Emergency Rehabilitation Plan. 2000.

U. S. Fish and Wildlife Service, Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada. 1990.

U.S. Fish and Wildlife Service, Environmental Assessment Proposed Land and Mineral Withdrawal at the Ash Meadows National Wildlife Refuge Nye County, Nevada. 2000.

Nevada Division of Wildlife. Breeding Status of the Southwestern Willow Flycatcher. 2000, 2002, 2003.

VII. ATTACHMENTS

- U. S. FWS Species list dated August 5, 2004 for Longstreet Fire at Ash Meadows National Wildlife Refuge in Nye County, Nevada.
- T&E Species and Critical Habitat Map
- Emergency consultation documentation on file at the Ash Meadows National Wildlife Refuge Office.

Karen Hayden, USDA Forest Service, Tahoe National Forest, 530-478-6244

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN
LONGSTREET FIRE

VEGETATION RESOURCE ASSESSMENT

I. OBJECTIVES

- Evaluate vegetation mortality losses and their potential impacts to Threatened, Endangered (T&E) and Sensitive plant species
- Evaluate and assess fire and suppression impacts to vegetation resources and identify values at risk.
- Determine emergency stabilization needs supported by specifications to aid in vegetation recovery.
- Evaluate potentials for invasive plant species encroachment into native plant communities and potential impacts to T&E plant species.
- Provide management recommendations to assist in vegetation recovery and species habitat protection and rehabilitation.
- Assess effects of the fire and suppression actions to Federally listed T&E species and their habitats.
- Conduct Section 7 Emergency consultation with the U.S. Fish and Wildlife Service (USFWS).
- Assess effect of proposed rehabilitation actions to listed species and habitats.

II. ISSUES

- Short and long-term impacts to plant communities and vegetation resources on the Ash Meadows National Wildlife Refuge lands within the Longstreet Fire.
- Protection and enhancement of other resource values including site biodiversity, meadow riparian plant communities, and T&E plant species.
- Management strategies which provide for the recovery and revegetation of heavily impacted areas.
- Identification, early detection, and early treatment of non-native invasive species spread within the burned area.

III. OBSERVATIONS

This report identifies and addresses known and potential impacts to vegetation resources within the Longstreet Fire on the Ash Meadows National Wildlife Refuge (AMNWR). Vegetation resources, for this assessment will be defined as plant communities, individual plant species, T&E plant species, and critical habitats for T&E/Sensitive plants.

Findings and recommendations contained within this assessment are based upon information obtained from personal interviews with AMNWR staff, literature reviews, and field reconnaissance of the fire area. Reconnaissance of impacted areas was conducted utilizing ground and aerial survey methods along with satellite imagery and data contained within the AMNWR Geographical Information System (GIS).

This assessment will attempt to capture the concerns and issues expressed by the AMNWR staff, USFWS Ecological Services staff, and local residents for the future management of the lands in and near the fire area. It will detail the known damage to the vegetation resource and will outline expected post-fire response and recovery of the vegetation; will discuss revegetation needs and non-native invasive species encroachment; and outline management considerations for recovery of the vegetation resources. Additionally, effects to listed T&E species will be discussed from the fire, fire suppression efforts, and proposed rehabilitation measures.

D. Background – The lightning-caused Longstreet Fire started in the late afternoon of August 1, 2004 north of the Ron Matheny residence on the AMNWR. High temperatures, winds gusting at 25-35 miles per hour, low relative humidities, and very low live fuel moistures resulted in a fast moving fire with rapid rates of spread through wetland meadow, Ash/Mesquite, and saltbush plant communities. Much of the Ash/Mesquite plant communities contained a high percentage of saltcedar (*Tamarix spp.).* The fire was declared contained on August 3, 2004. A total of 1,630 acres has been impacted by the fire, including private (39 acres), Bureau of Land Management (66 acres) and USFWS lands administered by the AMNWR (1525 acres).

Resource concerns expressed by AMNWR for vegetation resources include native vegetation loss, short and long-term impacts to meadow and mesquite/ash/willow habitats, and the potential for spread of non-native invasive species. Resource management direction was obtained from the *Ash Meadows Refuge Management Plan* (1987), *Recovery Plan for the endangered and threatened species of Ash Meadows, Nevada* (1990), and information contained within the *Draft Ash Meadows Comprehensive Conservation Plan* (2004).

E. Reconnaissance Methodology and Results On August 4, 2004 the BAER Team Vegetation Specialist arrived at AMNWR and received a briefing from local staff on resource concerns within the fire area. An aerial reconnaissance of the fire was conducted on the afternoon of August 4, 2004 and a vegetation mortality map was developed showing fire impacts to meadow, riparian and upland habitats. Information on vegetation, T&E species, T&E critical habitat, non-native invasive species, previous BAER rehabilitation efforts on the Fairbanks fire of 2000, and past weed control measures was obtained from the AMNWR staff. On August 4-6, ground surveys were conducted to map and document vegetation losses and survival; and to determine fire effects to vegetation species. Ground reconnaissance included traversing affected areas on foot, and recording observations on plant community types, species composition, mortality, topographic features, non-native invasive species, fences, and suppression damage. The AMNWR staff assisted in field reconnaissance and interpretation of past BAER rehabilitation efforts on the Fairbanks fire. The staff provided valuable information on plant communities, T&E species, non-native invasive species, treatment recommendations, and implementation strategies.

In order to better address resource issues and concerns, each major issue will be discussed separately. Management recommendations follow these issues to better define treatment actions and prescriptions.

1. Vegetation

Ash meadows is a unique wetlands system associated with springs, seeps, outflow channels and areas with high groundwater tables, including woodlands comprised of mesquite and ash trees and a variety of herbaceous communities. A recent checklist of vascular plants at AMNWR includes 332 taxa, of which 227 (83 percent) are native to the Ash Meadows ecosystem. Eight of the plant species are endemic and their distribution is restricted to the Ash Meadows area. Many of these species have been impacted by historic development of the area. In the early 1960's and 70's, springs and streams were extensively altered and diverted for agricultural development. Thousands of acres were leveled adjacent to the springs for alfalfa and other intensively farmed crops. In the late 1970's the property was purchased by a large land developer and initial work began for planned housing tracts and golf courses. In an effort to protect rare endemic species,

the Nature Conservancy purchased 12,654 acres in 1984 which was then sold to the USFWS that same year.

Primary plant communities that have been mapped in the fire area include creosote bush (*Larrea tridentata)* vegetation community predominates in the surrounding region of the fire while salt grass (*Distichilis spicata*), spiny saltbush (*Atriplex confertifolia*). Ash trees (*Fraxinus velutina* var.*coriacea*) mesquite *(Prosopis glandulosa var torreyana and Prosopis pubescens*), narrow-leaved willow (*Salix* exigua) dominate the vegetation within Ash Meadows. Cattail-bullrush wetlands occupy many of the man-made stream channels that bisect the fire area. Spring discharge maintains soil moisture in the lowlands while uplands only receive water from rainfall that averages less than 2.75 inches annually.

Ash Meadows is essentially a watered island amidst the expansive Mohave Desert. Because of this feature, however, there still exists endemic species whose existence has been threatened by land disturbance, moisture regime modification, and non-native invasive species expansion.

On August 4-6, 2004 vegetation mortality was mapped within the fire perimeter (Appendix III-Maps). Vegetation mortality was mapped based upon the percentage of the vegetation burned and how it affects plant community and wildlife habitat recovery (refer to Wildlife Assessment). Three mortality classes were mapped that included unburned to low vegetation mortality (0-25% loss), moderate mortality (25-60% loss), and high (60-100% loss). Observations were recorded on how much foliage of the trees had been removed by fire; if any branches were left and if only staubs were remaining. For forbs and grasses, observations were taken on the amount of above ground vegetation material removed and how much of the root crown remained. Due to erratic fire behavior, there are many high mortality islands that burned within the areas mapped as low mortality. It was not feasible to map each of these areas as most were less than ½ acre in size.

Mortality for the entire burn area is summarized below in Table 1:

TABLE 1: VEGETATION MORTALITY- Sum of Acres

Rating	TOTAL	Unburned - Low (0-25%)	Moderate (25-60%)	High (60% - 100%)
USFWS	1526	720	544	261
BLM	66	47	10	9
PRIVATE	39	18	21	
Grand Total	1630	785	575	270
Percent		48%	35%	17%

Approximately 17% of the vegetation incurred high vegetation mortality. That is, riparian areas containing ash, mesquite, and saltcedar tree species burned severely enough to remove all foliar cover, effect the cambium and roots and kill the trees. It was apparent from the aerial surveys that the historic and man-made stream channels that support tree and shrub species served as a conduit for fire spread within the meadow system. Vegetation resources were also impacted by suppression activities through back-firing operations and handline construction. Approximately 37.4 acres adjacent to Roger's spring and private lands were impacted by back- fires.

Approximately 65% of the fire area sustained moderate to high ground and foliar cover losses. Fire residency times were low, in many cases, due to the rapid spread of the fire, many of these species will resprout from rhizome or fire resilient root stock. Resprouting of mesquite and

saltcedar is expected however the competition factor of saltcedar with native species is of major concern. The loss of above ground foliar cover will create some loss of wildlife habitat for 1 to 7 years, depending on the plant association present.

Approximately 658 acres of the Longstreet Fire previously burned in the Fairbanks Fire of August, 2000 . The Fairbanks fire was rehabilitated during 2000-2002 with extensive work being conducted on non-native invasive species control (knapweed, saltcedar), native vegetation plantings (ash, mesquite, willow), and T&E species monitoring. The AMNWR staff provided excellent information and field verification of past rehabilitation successes and failures. Modifications in specification design and implementation have been incorporated into this plan, building on the experience of past rehabilitation efforts. Vegetation recovery of native species was noted including mesquite, Spring-loving centaury, and saltgrass. Regeneration of most native species such as saltgrass, mesquite, saltcedar, and the T&E plant species occurs through various underground rooting structures, which are well protected from the direct effects of fire by overlying soil. Prolific sprouting from rootstalks, roots, and rhizomes is probable even when the aboveground vegetation is totally consumed by fire. Exposed mineral soil can provide a favorable seedbed, and extensive postfire establishment of on-site seed was commonly observed in many species. Birds and mammals may also transport some viable seed from unburned areas into the burn area. High-severity fires, which burn to mineral soil, frequently create a favorable seedbed for buried seed, and seedlings sometimes germinate in abundance. Most vegetation within the Longstreet fire will recover naturally however the natural recovery of native species is overshadowed by the tremendous “explosion” of non-native invasive species observed within the old fire area. The Fairbanks fire demonstrated the rapid expansion potential of Russian Knapweed, Bassia, and saltcedar within fire-disturbed areas. Primarily, wherever bare soil existed, non-native invasives were able to expand.

In order to promote vegetation recovery and maintain ecological integrity of plant communities in the burn area, planting of native species and the control of aggressive non-native invasive species will be required. Specifications have been developed to initiate emergency stabilization actions within the fire to fulfill Agency mandates and federal law for the protection of listed species and their habitats, and the protection of critical natural and cultural resources.

Native plantings will be accomplished using native species propagated from locally derived seed sources that are adapted to the sites selected for treatment. Specifications were developed in consultation with staff from the AMNWR. These recommendations are consistent with existing management guidelines of the FWS, recovery plans for T&E species and National BAER Policy (DM 620 Chapter 3). Supplemental funding requests may be filed should existing specifications inadequately provide treatment requirements following closer field review of the impacted areas.

2. Non-native invasive species

Consultation with AMNWR staff revealed that non-native invasive species populations existed within the burn area and were being treated under an approved annual IPM plan for Ash Meadows NWR. Refuge-wide Pesticide Use Proposals (PUPS) were on file for treatment of non-native invasive species. The AMNWR staff provided field visits to treatment sites and provided honest dialogue concerning treatment successes and failures. Field reconnaissance confirmed weed locations and new occurrences were located. Mapped non-native invasive species salt cedar (*Tamarix ramosissima*), 5-hook bassia (*Bassia hyssopifolia*), Russian knapweed (*Acroptilon repens*), and Russian thistle (*Salsola spp*).

Saltcedar is found primarily along waterways and has the ability to totally choke out all vegetation in riparian areas. Saltcedar is a primary threat to the recovery of Ash and Mesquite and threatens critical habitat for many wildlife and plant species. Russian knapweed is expanding at an alarming rate, and at one site within the Fairbanks fire, has expanded from approximately 10 acres to over 25 acres since 2002. The AMNWR has successfully combated Russian knapweed in some areas

however the lack of funding and personnel now threatens the gains they have made on several large populations.

Management guidelines contained within the *Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada* state that "All non-native animals and plant species must be eradicated from essential habitat." Additionally, the plan states that " Historic vegetation must be reestablished in all areas not requiring maintenance of structures for management purposes."

The most prevalent non-native invasive species in the burn area that is expanding at an alarming rate is Bassia. Bassia is originally from Europe, is common is cultivated fields and probably was introduced to the Refuge through hay. Bassia was present at least since 1996 but has expanded on the Refuge over the past eight years and is spreading rapidly. Phenologically, it takes advantage of disturbed areas, grows to 5 feet in height with 10 foot diameters, and inhibits grow of other plants within its zone of influence. Bassia has a 5-hooked fruit and spines on its stems that make seed dispersal easy and walking through a stand difficult after maturation. The Longstreet fire reduced some accumulations of Bassia however it also contributed to fire intensity and spread due to accumulation of old plants in and around trees and shrubs. Many more trees were lost due to fuel accumulations of Bassia around their bases. Like tumble weed, it breaks off at maturity and is transported across the landscape disseminating seed. Where native species are prevalent, Bassia is not found. However, Bassia is an opportunistic non-native invasive species and there is a high probability it to infest the sites disturbed by the fire. Bassia occurrences were recorded in saltgrass, willow, ash, mesquite plant communities and on abandoned farm fields. Areas of bare mineral soil that are adjacent to existing weed occurrences will probably be occupied by non-native invasive species seeds. Bassia can only be treated during its early growth stage and native plantings will be required to reclaim bare soil areas to prevent re-infestation and plant growth.

The Refuge does not have good data layers showing all occurrences of non-native invasive species. The map contained within this plan shows the known occurrences of knapweed, Bassia and saltcedar within the fire area. However, there are populations that have been mapped that lie immediately adjacent to the fire area, (these also pose a threat to ecological integrity of plant communities), and there are larger acreages of weeds within the fire that have not yet been mapped. See Appendix III, Non-native invasive species map. Using local knowledge and maps, and based upon field observations, specifications within this plan have identified 450 acres of priority weed treatment areas. This includes approximately 75 acres of Bassia, 150 acres of knapweed, and 225 acres of saltcedar. This acreage figure is conservative. Emergency Stabilization funds requested in this document will be utilized to complete control efforts on existing weed populations to prevent further spread onto uninfested sites.

3. Threatened, Endangered and Sensitive Species-

On August 2, 2004 a request was made for members of the National BAER Team to respond to the Longstreet fire and assist with assessing fire impacts to resources at AMNWR. In response to this request, the National Team Leader sent an email to all Southern BAER Team members and requested that they access the USFWS website and review information pertaining to values at risk on the AMNWR. The website showed a total of seven endangered or threatened plant species. Information pertaining to these species was obtained from the *Nevada Natural Heritage Data* Base and additional information was sought from the *Fire Effects Information System*. On August 5, 2004 a species list was obtained from the USFWS Ecological Services Office, Las Vegas, Nevada for the Ash Meadows NWR, Nye County, Nevada. Emergency consultation was initiated on August 2, 2004 by staff from AMNWR.

To gain a better understanding of these listed species, information was obtained from *Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada* and from informational sources provided by the staff of AMNWR. Table 2 below summarizes the TES species considered:

TABLE 2:

Species	Scientific Name	Status	Within Fire Area	Critical Habitat within Fire?
Ash Meadows milkvetch	*Astragalus phoenix*	Threatened	N	Y
Spring-loving centaury	*Centaurium namophilum*	Threatened	Y	Y
Ash Meadows sunray	*Enceliopsis nudicaulis var corrugata*	Threatened	Y	Y
Ash Meadows Gumplant	*Grindelia fraxinopratensis*	Threatened	Y	Y
Ash Meadows ivesia	*Ivesia eremica (=I.kingii var. eremica)*	Threatened	N	Y
Ash Meadow Blazing Star	*Mentzelia leucophylla*	Threatened	N	Y
Amargosa niterwort	*Nitrophila mohavensis*	Endangered	N	N
Alkali mariposa lily	*Calochortus striatus*	Sensitive	Unknown	Yes
Ash meadow lady' tresses	*Spiranthes infernalis*	Sensitive	Yes	Yes
Death Valley blue-eyed grass	*Sisyrinchium funereum*	Sensitive	Yes	Unknown

This report will summarize habitat information for each of the listed species, except Amargosa niterwort which does not occur within the fire area, but will not repeat information that is available through the Nevada Natural Heritage Program and other supporting literature.

Biological Assessment for Federally Listed Species

Direct effects as described in this report refer to individual plant mortality, or disturbance resulting from fire effects, fire suppression impacts or emergency stabilization actions. Indirect effects refer to modification of habitat and possible subsequent affects to the species.

1. Ash Meadows Milkvetch: A perennial plant that grows on dry, alkaline soil where old plants naturally mound into clumps as much as 5.9 inches high with a diameter of 19.5 inches (USFWS 1990). Critical habitat includes 1,200 acres scattered throughout the Ash Meadows area. Surveys have been conducted on the AMNWR with no individual milkvetch plants located within the fire area. Critical Habitat for Ash Meadows milk-vetch is 14 acres.

Direct Effects: No direct effects are known to have occurred to this species. Known plant locations are outside the fire perimeter however critical habitat for the species was directly affected through the removal of 25-50% of vegetative cover.

Indirect Effects: Indirect effects to the critical habitat of this species as a result of the fire include temporary loss of vegetative cover, and increased risk of loss of biological diversity due to non-native invasive species encroachment.

Post Fire Observations: No Ash Meadows Milkvetch was observed during post fire reconnaissance.

Determinations of Effects:

Fire Effects: 25-50% of all vegetative species were removed by the fire within the Critical Habitat area. During post fire field reconnaissance, no individual plants were observed. Native species will revegetate the site. However, non-native species may encroach into bare ground areas where the fire affected critical habitat.

Suppression Action Effects: No suppression actions were initiated within the Critical Habitat for this species. Therefore the determination of suppression effects to Ash Meadows Milkvetch is **no effect.**

Proposed Emergency Stabilization Action Effects: Proposed suppression and burn area emergency stabilization actions for the control of non-native invasive species may impact non-target plants within the treatment areas that were not located during surveys. Every effort will be made during herbicide applications to avoid spraying non target species. In the event that individual milkvetch plants are within the treatment areas that have not been recorded to date, it was determined that the herbicide treatments may affect individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that species. Therefore, the determination of proposed emergency stabilization actions to Ash Meadows Milkvetch is **may effect, not likely to adversely effect.**

2. Spring-loving centaury (Centaury): A perennial plant that grows on moist and dry *Sporobolus* meadows and wet clay soils along the banks of streams or in seepage areas. Centaury grows along the edges with rushes and has rebounded in numbers since the removal of livestock off of the Refuge. Critical Habitat was designated at the time of listing on 1,840 acres. Centaury was seen at every wetland survey point within the fire and was abundant within the 2000 Fairbanks fire recovery area.

Direct Effects: Direct effects are known to have occurred to this species. Plant communities were impacted through fast moving fires and through back-firing suppression activities. Direct effects include the loss of individual plants and loss of vegetative cover within the plant community.

Indirect Effects: Indirect effects to the critical habitat of this species as a result of the fire include temporary loss of vegetative cover, and increased risk of loss of biological diversity due to non-native invasive species encroachment.

Post Fire Observations: Centaury plants and their associated habitat have been directly impacted by wildland fire and back-firing operations on approximately 34 acres. Centaury recovery through natural regeneration was noted within the Fairbanks Fire of 2000. This recovery is to be expected given the phenology and root structure of this species.

Determinations of Effects:

Fire Effects: Centaury species occurred within the low, moderate and high vegetation loss areas. During post fire field reconnaissance, individual plants were observed within adjacent non-burned areas within the fire perimeter; within old fire areas and within burned plant communities. Natural regeneration of this species is expected along with the regeneration of associated native plants (*Juncus spp.*). However, non-native species may encroach into bare ground areas where the fire affected critical habitat.

Suppression Action Effects: Back-fire suppression actions were initiated to stop the fire from crossing the road in the vicinity of Roger's spring. The back-firing action stopped the fire but did impact individual plants and their associated habitat. Back-fires tend to burn with less intensity than running headfires therefore impacts to the species would be expect to be less than impacts from the wildland fire. It was determined that the back-fire actions may have effected individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that

species. Therefore the determination of suppression effects to Spring-loving Centaury is **may effect, not likely to adversely effect.**

Proposed Emergency Stabilization Action Effects: Proposed suppression and burn area emergency stabilization actions for the control on non-native invasive species may impact non-target species within the treatment areas that were not located during surveys. Every effort will be made during herbicide applications to avoid spraying non target species. In the event that individual Centaury plants are within the treatment areas, it was determined that the herbicide treatments may effect individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that species. Therefore, the determination of proposed emergency stabilization actions to Spring-loving Centaury is **may effect, not likely to adversely effect.**

3. Ash Meadows sunray (Sunray): This member of the sunflower family is believed to be the most abundant and widespread of all plant species endemic to Ash Meadows. It is found in dry, upland areas in sandy, gravelly and alkali soils that are not heavily compacted. It occupies habitats of the Ash Meadows Milkvetch and Ash Meadows Blazingstar. Individuals are restricted to areas outside the influence from seeps and springs. Critical Habitat for Spring-loving centaury within the fire area is 65 acres.

Direct Effects: Direct effects are known to have occurred to this species. Plant communities may have been impacted through fast moving flames on the eastern edge of the fire in the proximity of Cold Springs. Individual plants were also ran over by fire suppression vehicles in a staging area immediately adjacent to Cold Springs. Direct effects include the loss of individual plants and loss of vegetative cover within the plant community.

Indirect Effects: Indirect effects to this species as a result of the fire include temporary loss of vegetative cover.

Post Fire Observations: Sunray plants and their associated habitat had been directly impacted by fire suppression vehicles on a 30 foot by 40 foot area east of Cold Springs. Abundant sunray plants were observed outside the disturbed area within low-lying drainage areas in alkaline soil sites.

Determinations of Effects:

Fire Effects: Sunray occurs on upland plant communities on the eastern edge of the fire. Some individual plants may have been impacted by the fire. During field reconnaissance, individual plants were observed adjacent to the burned perimeter but no plants were observed within the fire perimeter. Native species will revegetate the site. However, non-native species may encroach into bare ground areas where the fire affected critical habitat.

Suppression Action Effects: Suppression impacts to Sunray include the loss of individual plants that were crushed by vehicle tires in a staging/parking area above Cold Springs. It was determined that the suppression impacts may affect individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that species. Therefore the determination of suppression effects to Sunray is **may effect, not likely to adversely effect**.

Proposed Emergency Stabilization Action Effects: Proposed suppression and burn area emergency stabilization actions will not be implemented within the plant communities or Critical Habitat of Sunray. Therefore, the determination of proposed emergency stabilization actions to Ash Meadows Sunray is **no effect.**

4. Ash Meadows gumplant (gumplant): This species is frequently found with the Spring-loving centaury on moist soils influenced by seeps and springs. Critical habitat was designated at 1,968 acres at the time of listing. Several large populations and numerous smaller ones exist, with an

estimated combined total of 81,000 plants. During field reconnaissance, gumplants were observed growing along the Cold Springs road shoulder.

Direct Effects: Direct effects are known to have occurred to gumplant habitat but no direct impacts on individual plants were observed. Plant communities were impacted through fast moving fires and through back-firing suppression activities. Direct effects include the potential loss of individual plants and loss of vegetative cover within the plant community.

Indirect Effects: Indirect effects to the critical habitat of this species as a result of the fire include temporary loss of vegetative cover, and increased risk of loss of biological diversity due to non-native invasive species encroachment.

Post Fire Observations: Gumplant habitat has been directly impacted by wildland fire and 34 acres of habitat was impacted from back-firing operations. Post-fire recovery is to be expected given the phenology and root structure of this species.

Determinations of Effects:

Fire Effects: Gumplant Critical Habitat occurred within the low, moderate and high vegetation loss areas. During post fire field reconnaissance, individual plants were observed within adjacent non-burned areas within the fire perimeter. Natural regeneration of this species is expected along with the regeneration of associated native species (*Juncus spp.*). However, non-native species may encroach into bare ground areas where the fire affected critical habitat.

Suppression Action Effects: Back-fire suppression actions were initiated to stop the fire from crossing the road in the vicinity of Roger's spring. The back-firing action stopped the fire but did impact gumplant critical habitat. Back-fires tend burn with less intensity than running headfires therefore impacts to the species would be expect to be less than impacts from the wildland fire. It was determined that the back-fire actions may effect individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that species. Therefore the determination of suppression effects to Spring-loving Centaury is **may effect, not likely to adversely effect.**

Proposed Emergency Stabilization Action Effects: Proposed suppression and burn area emergency stabilization actions for the control on non-native invasive species may impact non-target species within the treatment areas that were not located during surveys. Every effort will be made during herbicide applications to avoid spraying non target species. In the event that individual gumplants are within the treatment areas, it was determined that the herbicide treatments may effect individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that species. Therefore, the determination of proposed emergency stabilization actions to Ash Meadow Gumplant Critical Habitat is **may effect, not likely to adversely effect.**

5. Ash Meadows Ivesia (Ivesia): This species occurs on highly alkaline, somewhat barren soils that remain moist adjacent to spring outflows. Ivesia occurs in meadows on flats and in drainages. Field reconnaissance did not find any Ivesia plants however the Critical Habitat for this species was within the fire perimeter where 25-50% of all vegetation was impacted by the fire.

Direct Effects: Direct effects are known to have occurred to Ivesia habitat but no direct impacts on individual plants were witnessed. Plant communities were impacted by fast moving flames but fire residency times were short. Direct effects include the potential loss of individual plants, although none were witnessed, and loss of vegetative cover within the plant community.

Indirect Effects: Indirect effects to the critical habitat of this species as a result of the fire include temporary loss of vegetative cover, and increased risk of loss of biological diversity due to non-native invasive species encroachment.

Post Fire Observations: Ivesia habitat has been directly impacted by wildland fire although no individual plants were located. Post-fire recovery is to be expected given the phenology and root structure of this species.

Determinations of Effects:

Fire Effects: Ivesia Critical Habitat occurred within areas of moderate vegetation loss. Natural regeneration of this species is expected along with the regeneration of associated native species (*Juncus spp.*). However, non-native species may encroach into bare ground areas where the fire affected critical habitat.

Suppression Action Effects: No direct impacts from suppression actions were observed or recorded in Ivesia Critical Habitat. Therefore the determination of suppression effects to Ash Meadow Ivesia is **no effect.**

Proposed Emergency Stabilization Action Effects: Proposed suppression and burn area emergency stabilization actions for the control on non-native invasive species may impact non-target species within the treatment areas that were not located during surveys. Every effort will be made during herbicide applications to avoid spraying non target species. In the event that individual Ivesia plants are within the treatment areas, it was determined that the herbicide treatments may effect individuals but are not likely to effect or cause a trend towards listing, or a loss of population viability of that species. Therefore, the determination of proposed emergency stabilization actions to Ash Meadow Ivesia Critical Habitat is **may effect, not likely to adversely effect.**

6. Ash Meadows Blazingstar: Blazingstar occurs on open, dry, hard, salt-crusted alkaline clay or sandy-clay soils on low bluffs, swales, flats and drainages in shadscale vegetation surrounding spring and seep areas. Surveys have been conducted on the AMNWR with no individual Blazingstar plants were located within the fire area. Critical Habitat for Blazingstar totals 33 acres within the fire perimeter.

Direct Effects: No direct effects are known to have occurred to this species. Known plant locations are outside the fire perimeter however critical habitat for the species was directly affected through the removal of 25-50% of vegetative cover.

Indirect Effects: Indirect effects to the critical habitat of this species as a result of the fire include temporary loss of vegetative cover, and increased risk of loss of biological diversity due to non-native invasive species encroachment.

Post Fire Observations: No Ash Meadows Blazingstar was observed during post fire reconnaissance.

Determinations of Effects:

Fire Effects: 25-50% of all vegetative species were removed by the fire within the Critical Habitat area. During post fire field reconnaissance, no individual plants were observed. Native species will revegetate the site, however, non-native species may encroach into bare ground areas where the fire affected critical habitat.

Suppression Action Effects: No suppression actions were initiated within the Critical Habitat for this species. Therefore the determination of suppression effects to Ash Meadows Blazingstar is **no effect.**

Proposed Emergency Stabilization Action Effects: : Proposed suppression and burn area emergency stabilization actions will not be implemented within the plant communities or Critical

Habitat of Blazingstar. Therefore, the determination of proposed emergency stabilization actions to Ash Meadows Blazingstar is **no effect.**

Sensitive Plant Species:

BLUE-EYED GRASS (*Sisyrinchium* spp.) is a perennial herb in the Iris family that usually occurs in wetlands, but is occasionally found in non-wetlands. Two species are found in Ash Meadows and some plants are exhibiting a combination of traits from both species. One of the species, the Death Valley blue-eyed grass (*Sisyrinchium funereum*), occurs mostly in Death Valley, California. The only known Nevada populations of this species occur in Ash Meadows. Current data are very limited. The Nevada Natural Heritage Program ranks both species as fourth highest in the state in priority for data development and recommends a full status review.

DIRECT EFFECTS: Since populations of blue-eyed grass are often found in association with spring-loving centaury and gumplant, effects to the blue-eyed grass would be similar to those of the two listed species.

INDIRECT EFFECTS: The most serious threat is loss of habitat to non-native species invading burned areas.

ASH MEADOWS LADY'S TRESSES (*Spiranthes infernalis*) is a tuberous perennial herbaceous orchid that is endemic to Ash Meadows. It is a wetland-dependent plant that occurs in permanently to seasonally wet alkaline meadows and often near spring outflows. This orchid is found with Baltic rush, spikerush, salt grass, spring-loving centaury, gumplant, mesquite, ash, and salt cedar. The U.S. Fish and Wildlife Service considers the Ash Meadows Lady's Tresses a Species of Concern.

DIRECT EFFECTS: Due to its close association with spring-loving centaury and gumplant, impacts to this species would be similar to those of the two listed species.

INDIRECT EFFECTS: The most serious threat is loss of habitat to non-native species invading burned areas.

ALKALI MARIPOSA LILY (*Calochortus striatus*) is a perennial herb arising from a small underground storage stem. This member of the lily family is found in moist alkaline meadows, or near seeps and springs and commonly with salt grass and ash. It is a U.S. Fish and Wildlife Service Species of Concern, Bureau of Land Management Special Status Species, U.S. Forest Service Sensitive Species, and a covered species under the Clark County Multi-species Habitat Conservation Plan. The alkali Mariposa lily has rarely been collected in Nevada, but has been found in Ash Meadows.

DIRECT EFFECTS: Unknown. There has never been a systematic survey of this species in Ash Meadows. The only known locations are outside of the burned area, but it has been located in the south Carson Slough.

INDIRECT EFFECTS: Unknown for the same reason as above.

C. Findings – Vegetation resources were impacted to varying degrees throughout the fire area. The single biggest threat to the recovery of native plant communities and T&E species and their associated habitats is the effective control of non-native species. Planting of natives to stem the spread of Bassia, Russian knapweed and saltcedar into bare ground areas is also necessary. Natural regeneration will recover many of the native grasses and forbs within the majority of the fire area. However, the influence of past land disturbance coupled with the

disturbance of this wildland fire will pose threats to the loss of biodiversity in many of the plant communities. Field reconnaissance showed that:

1. Approximately 17% of the fire area had 60% or greater loss of vegetation, so natural recovery is anticipated to occur in areas of low and medium vegetation mortality within 1 to 2 years and from 1 to 7 years in the high vegetation mortality areas (weather permitting). Natural regeneration is expected to revegetate the majority of the fire area but emergency measures are needed to protect soil productivity and prevent unacceptable expansion of non-native invasive species. This conclusion was supported through the review of the 2000 Fairbanks fire recovery.

2. Native plantings of saltgrass, endemics, and trees within the areas of heavy Bassia, Russian knapweed and saltcedar infestations should be accomplished with other planned treatments before the fall of 2005.

3. There is a high potential for non-native invasive species invasion onto uninfested sites within the burn area. Surveys should be conducted for the next 2 years to locate any new weed occurrences.

4. The implementation of an integrated pest management (IPM) program is required to achieve management directives for non-native invasive species control and emergency stabilization objectives.

IV. RECOMMENDATIONS

A. Emergency Stabilization

1. #, Native Plantings - Native plantings of grass, forbs, and trees are required to maintain biological integrity and biodiversity of plant communities within the fire area and stem the expected expansion of non-native invasive species.

2. # Non-native invasive speciesControl - Implement Integrated Pest Management practices to control existing weed populations within the fire area to prevent further spread of weeds.

3. # , Non-native invasive speciesMonitoring - Monitor known weed populations and new populations of non-native invasive species; monitor treatment effectiveness and implement adaptive management principles to effectively treat invasives within the Longstreet fire. Supplemental funding requests may be required based upon monitoring results.

B. Non-specification related recommendations

1. Actively pursue partnerships with The Nature Conservancy, U.S.G.S., Natural Resources Conservation Service, State, County, and Universities to assist in emergency stabilization implementation and monitoring.
2. Continue consultations with USFWS Ecological Services on PUP's and non-native invasive species control measures to ensure protection of T&E species.
3. Thoroughly document treatments and results for annual accomplishment reporting. Pursue supplemental emergency stabilization funding and rehabilitation funding as necessary.

V. CONSULTATIONS

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APPENDIX II – ENVIRONMENTAL COMPLIANCE DOCUMENTATION

INTERAGENCY
BURNED AREA EMERGENCY STABILIZATION PLAN
LONGSTREET FIRE
Nye County, Nevada
Environmental Compliance Considerations and Documentation

FEDERAL, STATE, AND PRIVATE LANDS ENVIRONMENTAL COMPLIANCE RESPONSIBILITIES

All projects proposed in the Longstreet Fire Burned Area Emergency Stabilization Plan that are prescribed, funded, or implemented by Federal agencies on Federal, State, or private lands are subject to compliance with the *National Environmental Policy Act* (NEPA) in accordance with the guidelines provided by the *Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508)*. This Appendix documents the Burned Area Emergency Response (BAER) Team consideration of NEPA compliance requirements for prescribed emergency stabilization and monitoring actions described in this plan for areas affected by the Longstreet Fire in Nye County, Nevada.

This plan identifies specific emergency stabilization and monitoring actions designed to mitigate damages to resources that result of the Longstreet Fire.

This plan has been developed by an Interagency Burned Area Emergency Response (BAER) Team, comprised of representatives from the: Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), U.S. Fish and Wildlife Service (USFWS), and U.S. Forest Service (USFS). The Team consulted with numerous other agencies, organizations, and individuals with subject matter expertise applicable to the proposed treatments (see consultation section below).

Agency Specific Guidance: This NEPA documentation has been developed in accordance with the following agency specific guidelines.

U.S. Fish and Wildlife Service: Emergency stabilization, rehabilitation and monitoring actions proposed on will comply with U.S. Fish and Wildlife Service, NEPA Guidelines, Part 516 (DM 6, Appendix 1).

RELATED PLANS AND CUMULATIVE IMPACTS ANALYSIS

Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada (1990).

Ash Meadows National Wildlife Refuge: *"to conserve (A) fish or wildlife which are listed as endangered species or threatened species….or (B) plants…"* 16 U.S.C. 1534 (Endangered Species Act of 1973).

Proposed Land and Mineral Withdrawal at the Ash Meadows National Wildlife Refuge and Environmental Assessment (2000).

Annual Noxious Weed Control Plan 2004, including NEPA Compliance Documentation and Biological Opinions.

Ash Meadows Fire Management Plan, 1986

Cumulative Impact Analysis*:* Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action, when added to other past, present, and reasonably foreseeable future actions, both Federal and nonfederal. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The emergency stabilization treatments for the Longstreet Fire burned area, as proposed in this plan, do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively

constitute a significant impact on the quality of the environment. The treatments are consistent with the management and recovery plans and associated environmental compliance documents of the U.S. Fish and Wildlife Service, and categorical exclusions listed below.

No direct or indirect unavoidable adverse impacts to the biological or physical environment would result from the implementation of this Longstreet Burned Area Emergency Stabilization Plan. The implementation of emergency noxious weed control and native planting treatments proposed in the plan would not result in any adverse effect on the natural and cultural resources of the burned area. Conversely, implementation of the plan would be expected to result in a cumulatively beneficial effect by reducing the potential for noxious weed invasion and ensuring the recovery of native habitats within the burned area.

APPLICABLE LAWS AND EXECUTIVE ORDERS

This section documents consideration given to the requirements of specific environmental laws in the development of the Longstreet Fire Burned Area Emergency Stabilization Plan. Specific consultations initiated or completed during development and implementation of this plan are also documented. The following executive orders and legislative acts have been reviewed as they apply to the Longstreet Fire Burned Area Emergency Stabilization Plan.

1. **National Historic Preservation Act (NHPA).** The BAER Team Cultural Resources Specialist has determined that emergency stabilization treatments will not adversely affect cultural resources within the Longstreet Fire burned area. This plan provides fund to complete any additional NHPA consultation and documentation requirements.

2. **Executive Order 11988, Floodplain Management.** All proposed treatments are in compliance with this order.

3. **Executive Order 11990, Protection of Wetlands.** All proposed treatments are in compliance with this order.

4. **Executive Order 12372, Intergovernmental Review.** Coordination and consultation is ongoing with affected Tribes, Federal, and local agencies. A copy of the plan will be disseminated to all affected agencies and funding is provided by the plan to facilitate completion of tribal consultations.

5. **Executive Order 12892, Federal actions to address Environmental Justice in Minority and Low-Income Populations**. All Federal actions must address and identify, as appropriate, disproportionately high and adverse human health or low-income populations, and Indian Tribes in the United States, The BAER Team has determined that the actions proposed in this plan will result in no adverse human health or environmental effects for minority or low-income populations and Indian Tribes.

6. **Endangered Species Act.** The BAER Team wildlife biologist and vegetation specialist have consulted with the U.S. Fish and Wildlife Service regarding actions proposed in this plan and potential affects on Federally listed species and have determined that there is no effect. Individual agencies are responsible for continued consultations during plan implementation as site specific treatments are developed.

7. **Clean Water Act.** All proposed treatments are in compliance with this Act. Emergency stabilization and rehabilitation measures proposed are necessary to maintain clean water within the burn and adjacent areas. Long-term impacts are considered beneficial to water quality.

8. **Clean Air Act.** Federal Ambient Air Quality Primary and Secondary Standards are provided by the National Ambient Air Quality Standards, as established by the U.S. Environmental Protection agency (EPA) (Clean Air Act, 42 U.S.C. 7470, et seq., as amended). The BAER Team has determined that treatments prescribed in the Longstreet Fire burned area will have short-term minor impacts to air quality that would not differ significantly from routine land use practices for the area. Long-term treatments proposed in the plan would be expected to have a beneficial impact to air quality through stabilization of ash and soils within the Longstreet Fire burned area.

9. **Wilderness Act.** The Longstreet Fire did not impact designated or proposed wilderness.

APPLICABLE AND RELEVANT CATEGORICAL EXCLUSIONS

Accept for aerial application of chemical treatments for noxious weeds, all treatment actions proposed in this plan are Categorically Excluded from further environmental analysis as provided for in the Department of the Interior Manual Part 516. All applicable and relevant Department and Agency Categorical Exclusions are listed below. Categorical Exclusion decisions were made with consideration given to the results of required emergency consultations completed by the BAER Team and documented in Section E below.

Applicable Department of the Interior Categorical Exclusions

Part 516 DM 2, App. 1.1	Personnel actions and investigations and personnel services contracts.
Part 516 DM 2, App. 1.4	Law enforcement and legal transactions, including such things as arrests, investigations, patents, claims, legal opinions, and judicial activities including their initiation, processing, settlement, appeal, or compliance.
Part 516 DM 2, App. 1.6	Non-destructive data collection, inventory (including field, aerial and satellite surveying and mapping), study, research and monitoring activities.
Part 516 DM 2, App. 1.7	Routine and continuing government business, including such things as supervision, administration, operations, maintenance and replacement activities having limited context and intensity; e.g. limited size and magnitude or short-term effects.
Part 516 DM 2, App. 1.11	Activities which are educational, in formational, advisory or consultative to other agencies, public and private entities, visitors, individuals or the general public.
Part 516 DM 6 App. 4.4 M (2)	Establishment of non-disturbance environmental quality monitoring programs and field monitoring stations including testing services.

Applicable U.S. Fish and Wildlife Service Categorical Exclusions

(1) Research, inventory, and information collection activities directly related to the conservation of fish and wildlife resources which involve negligible animal mortality or habitat destruction, no introduction of contaminants, or no introduction of organisms not indigenous to the affected ecosystem.

(3) The construction of new, or the addition of, small structures or improvements, including structures and improvements for the restoration of wetland, riparian, instream, or native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included.

i. The installation of fences.
ii. The construction of small water control structures.
iii. The planting of seeds or seedlings and other minor revegetation actions.
iv. The construction of small berms or dikes.
v. The development of limited access for routine maintenance and management purposes.

(5) Fire management activities including prevention and restoration measures, when conducted in accordance with departmental and Service procedures.

CONSULTATIONS

Nevada State Historic Preservation Office

U.S. Fish and Wildlife Service

Dan Walsworth, Refuge Supervisor, California/Nevada Refuges
Dick Birger, Project Leader, Desert National Wildlife Refuge Complex
Linda Miller, Deputy Project Leader, Desert National Wildlife Refuge Complex
Lee Nelson, Fire Management Officer, Desert National Wildlife Refuge Complex
Cristi Baldino, Wildlife Biologist, Ash Meadows National Wildlife Refuge
Sharon McKelvey, Refuge Manager, Ash Meadow National Wildlife Refuge
Shawn Goodchild, Wildlife Biologist, Ecological Services, Las Vegas, Nevada
Cynthia Martinez, Wildlife Biologist, Ecological Services, Las Vegas, Nevada

NEPA CATEGORICAL EXCLUSION DOCUMENTATION AND DECISION

Longstreet Fire Burned Area Emergency Stabilization Plan

NEPA CHECKLIST: Based on 516 DM 2, Appendix 2, if any of the following exception applies, the BAER plan cannot be Categorically Excluded and an Environmental Assessment (EA) is required.

(Yes) (No)

☐	☒	Adversely affects Public Health and Safety
☐	☒	Adversely affects historic or cultural resources, wilderness, wild and scenic rivers, aquifers, prime farmlands, wetlands, floodplains, ecologically critical areas, or Natural Landmarks.
☐	☒	Has highly controversial environmental effects.
☐	☒	Has highly uncertain environmental effects or involve unique or unknown environmental risks.
☐	☒	Establishes a precedent resulting in significant environmental effects.
☐	☒	Relates to other actions with individually insignificant, but cumulatively significant environmental effects.
☐	☒	Adversely affects properties listed or eligible for listing in the National Register of Historic Places.
☐	☒	Adversely Affects a species listed or proposed to be listed as Threatened or Endangered.
☐	☒	Threatens to violate any laws or requirements imposed for the protection of the environment such as Executive Order 11988 (Floodplain Management) or Executive Order 11990 (Protection of Wetlands).

NATIONAL HISTORIC PRESERVATION ACT

Ground Disturbance:

☐ None

☒ Ground disturbance will occur and an archeologist survey, required under section 110 of the NHPA will be prepared. A report will be prepared as specified by the BAER plan.

A NHPA Clearance Form:

☒ Is required because the project may affect sites that are eligible for or listed on the National Register. The clearance form is attached as the Cultural Assessment of the Longstreet Fire BAER Plan. The Nevada SHPO has been consulted under Section 106 (see Cultural Resource Assessment, Appendix I).

☐ Is not required because the BAER plan has no potential to affect cultural resources (_____ initials of cultural resource specialist).

OTHER REQUIREMENTS

(Yes) (No)

☐	☒	Does the BAER plan have potential to affect any Native American uses? If so, consultation with affiliated tribes is needed.
☒	☐	Are any toxic chemicals, including pesticides or treated wood, proposed for use? If so, l local agency integrated pest management specialists must be consulted.

CONCURRENCE AND SIGNATURES

I have reviewed the proposals in the Longstreet Fire Burned Area Emergency Stabilization Plan in accordance with the criteria above and have determined that the proposed actions would not involve any significant environmental effects. Therefore, the plan is categorically excluded from further environmental (NEPA) review and documentation. BAER Team technical specialists have initiated necessary coordination and consultation to ensure compliance with the National Historic Preservation Act, Endangered Species Act, Clean Water Act and other Federal, State, and local environmental review requirements. The plan provides funding to continue and complete necessary consultations as site specific treatments are developed.

BAER Team, Environmental Protection Specialist **Date**

( ) I concur and it is my decision to approve the plan.
( ) I do not concur because.

Project Leader, Desert National Wildlife Refuge Complex **Date**

( ) I concur and it is my decision to approve the plan.
( ) I do not concur because.

APPENDIX III – MAPS

APPENDIX IV – PHOTO DOCUMENTATION